NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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APRIL---FLOWERS AND FLOWER-GARDENS.

Among the numerous topics which are interesting to the farmer, the flowers of our gardens should not be omitted,—those brilliant ornaments of the earth, which nature seems to have designed to lead us in early life, by their charms, to love the field and wood, and in later life to enliven our toil by their fragrance and beauty. No farmer should allow himself to despise a flower, as some mere utilitarians are very apt to do; for, though it may be uninteresting to him, if he has no poetry or love of beauty in his soul, he should consider that flowers serve greatly to render their home delightful to the young, and to cherish in their hearts a love for the pursuits of a farm. To the daughters of a farmer, flowers are almost essential to inspire them with an interest in rural pursuits, and a reasonable amount of labor and expense should never be grudged to furnish them with so simple and innocent a gratification.

Fashion, who always impudently inteferes with our pleasures, has not failed to meddle with the flower-garden as well as the *boudoir;* and has often stamped an absent value upon certain flowers, which have no claims, as beautiful objects, above thousands of others which are common in our land. We would advise all to keep themselves clear of her sinister influence; and in the choice of flowers to decorate his grounds, to be guided by his sense of the beautiful, and by those early impressions and associations, which give to many simple flowers a practical interest that can never fade in our hearts. The most simple and common flowers of our gardens belong to this category. Such are the primrose, the pansy, the snow-drop, and the lily of the valley. Who can ever cease to admire the rose and the lily?

All persons have been familiar with these flowers, in their early intercourse with nature, or have learned to love them by reading the frequent allusions to them in the poetry of all ages, and in Holy Writ. Many a modern florist's flower surpasses these in beauty. Portulaccas, verbenas, dahlias and calcealarias, are all more brilliant and showy; but they have never been sanctified to our religious feelings by the mention of Scripture, nor endeared to our imagination by the song of the poet of nature.

The rose has always been regarded as the emblem of beauty and virtue, having in addition to its visual charms, a fragrance that always endures. The sacred and profane writers have always associated this flower with those heavenly virtues which they love and reverence.

> "Oft has the poet's magic tongue
> The rose's fair luxuriance sung,
> And long the Muses, heavenly maids,
> Have reared it in their tuneful shades."
>
> *Anacreon.*

The lily is another flower, no less common, and no less celebrated; and it is often mentioned in the Scripture. The Jews are said to have imitated its form in the decorations of their great temple. Among all nations it is considered the emblem of meekness and modesty, and it symbolizes, no less than the rose, those virtues which are loved in heaven. The rose and the lily, therefore, should find a place in every garden, both on account of their intrinsic beauties, and their Scriptural and practical associations.

There are other flowers which have become endeared to us by our perusal of the English poets, though they have not been named by the sacred writers; which are also recommended to us by our

familiarity with them in childhood, and by the ease with which they can be cultivated in our gardens. Such are the pansy, or tri-colored violet, and the primrose already mentioned; and such are the daffodil, the tulip, and the crocus, earliest of all, and the iris, all of which are flowers of spring, and some already in bloom, under the protection of our garden fences and dwelling-houses.

How vividly is the remembrance of our early home associated with these simple flowers, and how greatly do they serve to give cheerfulness and sacredness to the grounds which they occupy. No farmer's house should be left unadorned with these simple and beautiful flowers, which require no wealth to purchase them, and no expensive labor to preserve them in all their beauty.

We do not intend to undervalue the hundreds of new species of garden flowers, which modern taste and enterprise have introduced into our pleasure-grounds; it is simply our object to prove that the purchase and cultivation of these rare exotics are a needless expense, and that a garden may be made delightfully attractive without them. The common bulbous-rooted flowers, and a few others, already named, are sufficient to embellish our grounds in the early spring. Later in the season come forth the roses, in many beautiful varieties; the lilac, which must ever hold a place in our affections, and which no generation can ever cease to admire; the honey-suckle, the most fragrant and beautiful of twining plants;—all of which are common, easily cultivated, and involving but little expense. Most of the late flowers are annuals, which require more care and attention than the perennials just enumerated. Many of these are worthy of every one's attention; such as the greater and lesser morning glories, the last of which is unsurpassed in beauty and delicacy by any newly-discovered flowers. The balsams, the marigolds, the German asters, and many others which are familiar to us, bring up the rear, and serve to beautify our gardens in the latter part of summer and early autumn.

Here we would repeat, that if we wish to inspire our rising offspring with an enduring love of the scenes of home, (for a love of home itself springs from moral influences,) and an attachment to rural pursuits, our farms must not be without their flower-gardens—neat, modest and simple gardens—that do not dazzle the eyes, but present hundreds of simple and beautiful objects, to be loved in youth, and remembered ever afterwards, as the *souvenirs* of that happy period of life. On the other hand, if while our farmers' sons and daughters are growing up to their adult years, they witness at home nothing but toil and drudgery within doors and without; no flowers around the house, no pictures inside of it, no conversation except of labor and stock, and the prices of produce, nothing expended for taste and ornament, would it be surprising if they considered a farmer's life a miserable life of drudgery, and the farmer's home a mere work-house, and that they should long to escape from it, and engage in some more animating employment?

But if the heads of the family possess a taste for the charms of nature; if they are alive to the beauties of a flower, to the warbling of birds; if they value trees on account of their beauty, as well as for their utility and their shade; and when they look abroad upon the landscape, they can reflect with delight upon its grandeur, and its loveliness, as well as upon its profitableness for cultivation, then are they likely to gather around them certain beautiful objects that should be a source of perpetual joy to their children, and inspire them with a love for the scenes of home, which must always endure. It is from the want of this attention to matters of taste; this contempt of ornament, and indifference to the charms of beauty on the part of the parents, that so many young men have grown up without local attachment to the place of their birth, and leave their homes, and forsake the farm to join in trade and commerce, which are thus overstocked with laborers and adventurers, while agriculture is neglected. If we would teach our children to "venerate the plow," we must render it suggestive to their minds of something besides unmitigated toil. It must be associated with all the beauties and pleasures of country life. It must be the remembrance of happiness which the country only can yield, but which are too often absent from the farm; it must call to mind the flowers of the field and the garden; it must be associated with instruction in the fields, and with amusing and rational studies on pleasant winter evenings. Then will the enticement to young men, who are farmers' sons, be greater to join the interesting and noble pursuits of agriculture, with their freedom under the blue canopy of heaven, and a competency of all the good things of life, in preference to the slavery and confinement imposed upon them by the pursuits of commerce.

In the course of these remarks, we have said nothing of the style in which the garden should be laid out, because we consider this a matter of no essential importance, provided the style be sufficiently plain and simple. Our main object should be to have a plat of ground, or several spots, devoted to the culture of flowers—a bower of taste, where the old can find recreation after the release from toil, and where the young may find rational amusement and delight which will bind their affections to nature and to home. Far be it from us to recommend any thing like ostentation around the simple rustic farm.

"In simple Gardens, Wisdom loved to rove,
And smiled to give her precepts from the grove.
When to the wise, the good, the brave, the Gods
Prepared th' eternal gift of blest abodes,

No palace was the prize—but soothing shades,
And flowers that laugh along the varied meads,
To more sincere delights invited ease,
And promised dearer joys, more lasting peace."
De Lille.

For the New England Farmer.

INSURANCE COMPANIES.

MR. BROWN:—An article in your last number, February 14, on Fire Insurance, together with your suggestions, has stirred one of the readers of the *Farmer* not a little. Your correspondent, P. B. P., can give the name of *that* company which refused payment, on the ground of additional risk of a portico attached to the house, when the barn was burned; especially, when the insured took means to ascertain of the company's secretary the relation it had to his policy.

I am insured in one of the mutual companies in Mass., (or have a policy,) and if the one to which I belong has been guilty of so mean a transaction as that stated above, I want to know it. Can these things be so? Job offices I have always considered unsafe; but mutual companies are not all so, or at least, I have not so considered them. If the one in which I hold a policy is obliged to take such a course to live, the presumption on the face of it is, that it is a rotten concern, which should be known to be avoided.

I wish your correspondent would name to which he alluded. At any rate, the public is indebted to him for his valuable suggestions. H. J.

For the New England Farmer.

MOWING MACHINES.

There seems to be a strong impression abroad that mowing machines will not operate well on New England farms. From the experience of one year's use of Manning's mowing machine, I think that impression is wrong.

Last hay-time, I commenced on the Monday after the 4th of July, with a raw hand, never having used a mower over five minutes before. I went into a piece of clover of about one acre, and mowed it in two hours, and I mowed it well. This was my first trial. The clover was about a ton to the acre, and the stones but indifferently picked. My team consisted of two old horses, both of age, but they carried it with perfect ease. After that, I proceeded to mow with the mower all my upland that had been laid down tolerably smooth, and I liked it much. I could go into the field after the dew was off, and cut from two to three acres, as I chose, before noon. I did not make but one trial of time after the first; then I cut one-half an acre in forty minutes, without much hurrying. After the hay was dry, it made fifteen stout cocks, and a good load. Myself an invalid, and my two old horses, could cut as much grass as three hands could take care of through the day, and get in. I remained in the field from two to five hours, just as I thought we could take care of the grass cut.

In the afternoon I would hitch one of my horses to my horse-rake on wheels, and rake at the rate of one to two acres per hour. The help allowed that I did more than half the work on the upland. I am surprised that the horse-rakes on wheels are not more used; I have used one 5 years, and would not take $100 for it, if I could not get another.

The objections urged against the mowing machine are, first, the cost. That is considerable; from $90 to $130, according to size. The next is, that it costs so much to keep it in repair. I broke out three teeth, which I put in myself with a screw-driver in fifteen minutes each. And last, that my three hands had nothing to do while I was mowing. My help consisted of two Yankees and an Irishman, who did not mow, but was otherwise a good hand, hired at five shillings per day. They thought they had work to do. First to milk; then to unload two or three loads of hay; mow around the fences and runs; open from fifty to one hundred and fifty cocks of hay, and turn it. Then there were five or six acres of corn and potatoes, and a garden, neither of which was the worse for an Irish visit. They thought they worked, and I thought they worked, and was satisfied to pay them for their work. I usually keep two horses, but in haying time have had but little use for them in the forenoon, until I had a mower.

This is the first year's experience in the use of the mower. All who saw it allowed that my grass was cut extra well, and without much fatigue to myself or horses. Next haying, I intend to have a mower with a reaper attached, and if I succeed as well as last year, I shall consider my upland haying but half the job it was ten years ago.

Hollis, N. H., Feb., 1857. E. EMERSON.

REMARKS.—That is the way a practical man tells his story. O, ye cavillers and doubters! Go and see Mr. Emerson next July, and argue him out of all that nonsense, *if you can*; but go in as obstinate a mood as possible, so as not to get converted yourselves.

GOV. BOUTWELL ANSWERED.

It may be recollected that Gov. Boutwell, of Massachusetts, in an agricultural address delivered by him last year, undertook to make some very sober comparisons between the West and the East; in which he showed, amongst other things, by statistical facts, that after all which is said of the immense productiveness of the Great West, right here, in old sterile New England, in Massachusetts and Vermont, where the population per square mile is ten times as dense as in the Mississippi Valley, there is more actually raised annually, *per capita*, for the support of life, than in Ohio, Indiana or Illinois. Such a fact as this would hardly escape the notice of Western speakers and writers, and we have been looking for some candid answer to Gov. Boutwell, which should relieve the West from a comparison so unfavorable. Hitherto all is silent; but at length the silence is broken by Hon. A. C. Barry, who, in an address delivered by him befors the Wisconsin State Agricultural Society, in Milwaukie, in October last, notices this statement of Gen. Boutwell, and proceeds to reply to it in the best manner he could. But his reply is exceeding impotent and futile—a virtual confession, as it appears to us, that the fact is as Gov. B. stated it.—*Drew's Rural Intelligencer.*

☞ The *Green Mountain Farmer* says that there are 5,159,641 pounds of maple sugar made annually in Vermont, being 2,973,293 pounds more than are made in all the rest of New England.

BUILDING IN FROSTY WEATHER.

The bond which unites brick to brick and stone to stone, to form a close and adhesive connection between them, is a cement (mortar) formed of the oxyd of calcium (lime,) silica or sand, and water. The water intimately diffused through mortar is the vehicle which plays the most important office—chemically speaking—in conferring those qualities upon mortar which render it capable of fulfilling the objects for which it is used. And yet most builders, architects, and those who have buildings erected during the winter season, appear to be entirely ignorant of this fact in chemical science.

The water in mortar holds lime in solution, and gradually attracts carbonic acid from the atmosphere, whereby its particles acquire powerful and adhesive properties, and in the course of time it becomes a stone itself, firmly adhering to the surface which it unites. If we dissolve some quicklime in water, in a vessel, and allow it to stand exposed for some hours, it will attract carbonic acid from the atmosphere, and a thin, hard scale like ice will form on its surface; this is a pelicle of marble, it is composed of lime, water, and carbonic acid. The scale formed on the surface of the lime solution in the vessel, prevents carbonic acid penetrating under it, otherwise a thick solution of lime would soon become a solid block of marble. But in common mortar the conditions for the absorbing of carbonic acid throughout all its parts are very perfect, because the particles of sand render it sufficiently porous to allow the air, which contains carbonic acid, to penetrate to its inmost parts; therefore mortar ultimately becomes a stone. If we take quicklime and sand, mixed together in proper proportions to form good cement, but use no water to make them into mortar, exposure of them to the atmosphere for centuries would not form them into a hard stone, because the water of crystallization, which is positively necessary to promote cohesion among their particles, is wanting. Water, then, is the great vehicle which chiefly imparts cohesive properties to common mortar.

Hard water, in freezing, parts with the mineral and earthy matters which it holds in solution, and the ice, when melted by heat, forms soft water; the action of freezing separates the pure water from the substances with which it was previously intimately united. The very same effect is produced by the action of freezing mortar in the walls of buildings; the mortar that is frozen in walls never afterwards acquires strong cohesive properties.

It is customary to suspend operations on buildings of brick and stone, during very severe frosts, when mortar freezes rapidly, but this is only because of the mechanical difficulties of applying the mortar before it freezes; the chemical science involved in the act of freezing its water being either unknown or ignored. Mortar should never be allowed to freeze in the walls of buildings; to allow it to do so, is unwise and unscientific.—*Scientific American.*

COUNTY TRANSACTIONS.—We are under obligations to the officers of most of the County Societies of the State for a copy of their Transactions for the year 1856. At this season of the year our columns are so completely occupied by the favors of correspondents, that we find it difficult to notice the peculiar merits, or what may seem to us defects of each; or extract from them as we should be glad to. Every one of them, however, we have examined with care, and hope to find room for a further notice.

In the Transactions of several of the Counties there are evident improvements in the matter, and especially in the *manner* of making them up. Still, there is considerable room wasted by repetitions and the introduction of unimportant articles. We have now before us the Hampden, Norfolk, Plymouth, and Hampshire, each and all of them containing instructive and pleasant articles for us all, to which we must refer when our columns are relieved from their present pressure.

For the New England Farmer.

APPLE TREES AND CIDER.

"TIMES CHANGE, AND MANNERS WITH THEM."

In 1832, it was remarked by a distinguished gentleman, then President of one of the Agricultural Societies fostered by the bounty of the State—"It is a matter of regret, that for many years past there should have been so little competition for the premiums offered by the Society for cider.—When it is considered that good cider always brings a good price, and is a pleasant and healthful beverage, and may be used in promoting the cause of temperance, in the place of intoxicating liquors, we are surprised that its quality should be so little regarded."

What think you, Mr. Editor, of these notions of the fathers of the last age? Were they entirely in the wrong? Our best farms now abound in orchards planted for the purpose of making cider. I can remember, when seven hundred barrels of cider were made at my father's mill, in one season, and no one dreamt of there being harm in the operation. Have we all at once become so much wiser and better than our fathers were? Or is it true in this, as in many other things, "Young folks think old folks fools, but old folks know young ones to be so." Let us know your views about having mills for the making of *good cider.* For myself, I think there is no more harm in making cider from apples, than there will be in making sugar from that *outlandish plant,* of which, at present, we know little or nothing.

Feb. 2, 1857. A CONSERVATIVE.

WINTER PRUNING.—Will trimming fruit trees during the winter time, injure them in any way? I have a large orchard which I want to trim thi winter. Would the place where the limb was sawed off dry up and rot, or heal over in the spring? Which is the best time to trim?—E. DENNISON, *Forestville, N. Y.*

Trimming orchards in winter has been long practised by some good orchardists with success. The sap not moving at this time, the wood when cut becomes dry at the surface in a short time, ready to receive a coat of protecting cement. This coat may be applied soon after cutting, or the following spring. A hot mixture of tar and brick-dust, or tar and pounded dry clay, answers a good

purpose; but a thick solution of shellac in alcohol is more neatly applied and is generally preferred, although more expensive. Some good orchardists prefer midsummer to winter, and it is probably the best time, all things considered.—*Country Gentleman.*

For the New England Farmer.

FIRE INSURANCE.

IMPORTANT TO PEOPLE WHOSE PROPERTY IS INSURED AGAINST FIRE.

People who get their buildings insured do it in good faith that if they are burned they will be paid the amount insured. Those whose property is insured are not generally aware of the network of bylaws in which they are entangled, but, when buildings are burned, how often is this fact brought to light. Let a person examine the records of a mutual fire insurance company, and he will be astonished to find how large the proportion of the claims presented for loss by fire is, which the directors have voted not to pay. Now why is this so? Because their bylaws are so framed that many do not understand them; and by some inaccuracy in the application, or some neglect, or change of circumstances, a policy is rendered void.

It is the custom of insurance companies to send out their agents (who are oftentimes directors of the company) to get applications for insurance. They will present the affairs of the company in their most favorable light, and, when they shall have prevailed on a person to get his buildings insured, will write the application for the usual fee. In this case the applicant supposes the business is done correctly; that at any rate a policy issued on an application made out by the company's agent must be valid. His policy is issued, his premium note is given and the per cent. required upon it is paid, and the assured rests confident that in case his buildings are burned his *insurance* will be paid. Now it happens that his buildings are burned, and when his claim is presented for his loss, the officers of the company are not slow in ascertaining that his application is defective. This he is told, and that his policy was void from the beginning, therefore he has no claim upon the company. In vain he argues that if there is any fault in the application it was the work of one of the company's officers and not his own; for he is told that they are not responsible for the acts of their officers. Not satisfied with such logic, he prosecutes the company, and at length has to sustain the loss, not only of his buildings and the amount paid for insurance, but he has to pay the heavy expenses of a lawsuit.

In another case, a person whose buildings are insured, builds upon his house a small porch some four feet wide. He takes his policy to the office to see if any alteration in it is necessary. The secretary remarks to him, the risk is not increased by this addition, is it? The assured replies, I do not know that it is. Well, then, says the Secretary, there is no need of any alteration, your policy will still be good. Well satisfied that all is right, he returns home. Before his policy expires, his barn is burned; his claim is presented, and the directors vote not to pay it; he inquires for the reason of so unexpected a refusal to pay his insurance. He is told that the risk upon his buildings was increased by the addition which he had built upon his house. But, says the assured, your Secretary told me that my policy would still be good, notwithstanding that. We are not responsible for what he told you, is the reply. No, no, says the Secretary, I told you that if the risk were not increased your policy would still be good. The conversation that ensued need not be related here. Enough to say, the company were prosecuted, and the assured lost his case, notwithstanding it was his *barn* that was burned, and not his house.

Again, a man has his buildings insured, and before the expiration of the policy he dies, and his property descends to his heirs. They read the policy, and find it insures the buildings to their father and his heirs, and they conclude that the policy is good to them. The buildings are burned and when their claim is presented they are told that the policy became void at the decease of their father. But, say they, this policy insures the buildings to our father and his heirs. Yes, says one of the officers of the company, but that means that if the buildings had been burned in the lifetime of your father, and he had not been paid the insurance, his heirs could have collected it.

In another case a man dies leaving his dwelling-house to his widow during her lifetime. At the expiration of a policy of insurance upon the house at the death of the husband, the widow is prevailed upon to have it insured again for the same amount as before. Now the application did not set forth her interest in the house, and it is insured for more than three-fourths of the value of her life estate in, and her policy is void so that she cannot recover her insurance, notwithstanding she may have paid as assessment to the full amount of her premium note.

We might go on and enumerate cases almost without number in which policies for insurance have been void from the beginning, or have become so from some neglect or change of circumstances, and it might not in any case have entered into the mind of the assured that his policy was not good.

Now there must be a great fault exsiting somewhere, or these things would not be so. On whom then shall the blame come? Certainly not on our courts of justice, for they are composed of men of integrity and profound legal knowledge. They are not legislators, but the judges of the law. It is their province to expound the law according to its literal meaning, although a great moral wrong may be done by such an exposition of it. Some one may say, will not a jury of twelve disinterested persons be likely to decide a case justly? There are many cases that never come to a jury, but are decided on certain points of law, and when a jury give a verdict in a case, the jurors are under a solemn oath to give it according to law and evidence, and as the law is explained to them by the court. There is no getting round the law to get at justice, but he that has got into the law must abide the law. Hence it is that so many persons give up their just rights rather than engage in litigation. Perhaps some may say, the fault is owing to the ignorance or carelessness of those who get their property insured. We admit that they may not look so closely into the laws relating to insurance as they ought to do, but they are generally the honest, confiding part of the community, who deal with others in good faith, and they are little aware that they have bound themselves by laws which are like so many traps set in their paths. Cases have occurred, which, in certain places, have aroused

people to realize these facts, and I believe a strong feeling of disapprobation prevails against the management of the officers of some insurance companies, at least, and I think not without reason.

Reader, have you paid your money to have your buildings insured against fire? If so, look to every thing that can affect your policy, for I do not believe there is one in four that is good against a mutual fire insurance company, and you nor I may not be among the lucky ones. P. B. P.

THE CULTIVATION OF GARDEN FRUITS.

We have given several times discussions by the Farmers' Club at Concord, Mass., and they have been of a nature to attract sufficient attention to be copied by other journals. At a recent meeting, the subject under consideration was the cultivation of *Garden Fruits.* Among the speakers was John B. Moore, Esq., of Concord, well known to the farmers of Middlesex county, and to the horticulturists of the State. We have a sketch of his remarks, and yield our own space in order to give them seasonable room. He spoke first of

The Currant.—It is a hardy shrub and of easy cultivation; for sauce, and cooking in various forms, it can be produced at less expense than almost any of the garden fruits; still, from want of proper cultivation, you will find ten bushels of poor to one of well grown fruit. In their cultivation, I have tried various methods of pruning; the tree shape I was much pleased with for three or four years, then I began to have trouble with the worms in the stalk, which has obliged me to give up that manner of pruning. I now raise my plants from the cuttings allowing them to branch from the ground, and occasionally thinning out the old wood. I plant a few bushes in a warm and dry location for early use, but for the main crop, select a strong, moist and rich soil, then with good cultivation and proper thinning of the wood, it will be almost a certain crop.

The Gooseberry.—I have had much less experience with the gooseberry, have cultivated hardly any but the foreign varieties, and losing most of the crop by mildew; some of the American varieties have succeeded better; they require cultivation similar to the currant.

The Raspberry and High-bush Blackberry, I have cultivated with indifferent success. Some of the varieties of each are splendid in size and quality.

The Grape.—That the grape is one of the most desirable of all our fruits there is no doubt, and that for out-door cultivation, the variety called the Concord, for its earliness, hardiness, quality, productiveness, and general vigor of growth, is unsurpassed by any variety now in cultivation which we have proved.

The Strawberry, so high flavored, fragrant and beautiful in appearance, with its productiveness and ready sale in the market, if rightly managed, is so easy of cultivation, that no farmer should neglect to raise enough for the consumption of his family. I know that some farmers say that we cannot afford to grow or eat strawberries or any of the small fruits, but that we must give all our time to the potatoes and corn, and that hog and hominy, with occasionally a few whortleberries when they do not sell for more than three cents a quart in the market, is all that farmers can afford to eat. But I believe that if any portion of the community are entitled to eat fruits, it is those that grow them, and also that it is a duty that every cultivator owes to his family to produce at least enough for their consumption.

Now as to the method of cultivation. I have tried various modes, single rows, beds and hills, but were I now intending to grow them to any extent I should adopt the following method: in April or May, having the land plowed and harrowed fine, work in manure enough to last two years and proceed to plant in rows three feet apart; then sow between each row a row of turnip-beets or some other vegetables that the crop could be gathered in August; keep the ground free from weeds, allowing the plants to spread as much as they please.

The next spring, as soon as the land is dry enough to work, spade over the ground one foot wide where the rows of beets stood, which will leave the beds of strawberries two feet wide, the space of one foot which was dug over making the path; then thin the plants where too thick. About the first week in June, mulch the paths with fresh cut grass, when everything is done but gathering and marketing the crop. After they are all gathered, which will be from the 5th to the 10th of July, put on a dressing of manure, and plow with a sod plow; turn over smoothly, sow with rutabaga, or corn, or oats for fodder. My reasons for this course are the following: the first year the crop of vegetables between the rows will pay the expenses, and the strawberries are easily managed and very certain to leave the ground well stocked with plants; the second year you will get a full crop without much labor and little annoyance from weeds; if you undertake to weed out and continue the bed another year, you will have an almost endless job of weeding in a very busy time of the year, and if you should go to the trouble, your crop will be much smaller than the first year. By following this plan I think they can be produced much cheaper than otherwise.

Now suppose a person devotes four square rods to strawberries for his family,—from that with good cultivation he will get 100 quarts, which is much less than I have seen grown on the same quantity of land; how can he supply his family with anything better or cheaper?

If you want the profit, compare the result with

potatoes on the same quantity of land; if my theory is right, the first year paying all expenses, the second year, up to harvesting, the cost will be about the same for each crop; the worth of the potatoes from the four rods, say two barrels at $5,00, cost of harvesting and marketing to Boston $1,25, leaving a balance of $3,75 for the crop of potatoes; then the crop of strawberries, 100 boxes at 25 cents, $25,00, picking and marketing, 7 cents a box, $7,00; leaving a balance of $18,00 in favor of the strawberries, or $14,75 more profit than the potatoes. I shall not say anything of the peach, pear, plum and quince, regarding them rather as of the orchard than the garden, and will close by saying that if here, in Concord, we should give more attention to the cultivation of the small fruits, it would be not only a source of pleasure, but of profit. The saving that we should make on the freight of the small fruits compared with the heavy vegetables would be no small item.

For the New England Farmer.

THE GOVERNOR'S AGRICULTURAL NOTIONS.

With great propriety his Excellency queries whether or not the time has not arrived, when a limit should be placed to the incorporations of new agricultural societies, with the aid of *the bounty of the State.*

While these societies embraced entire counties, we saw no objection to their organization, but when they come to be four in a single county, Worcester and Middlesex, [three in Middlesex.—ED.] for instance—giving four times as much money to each of these counties as was given to other counties of equal population and business—it was apparent that here was an inequality that might awaken jealousy and dissatisfaction. For ourselves we should be satisfied if this State bounty was entirely discontinued. We think the societies can get along quite well without it, much better than a straitened State treasury can in paying it. We think the farmers are so alive to the advancement of their own best interests, that they will sustain societies *when* and *wherever* they ought to be sustained.

It has been demonstrated, again and again, that *one thousand dollars* annually can easily be raised by the receipt of a small admission fee, from those inclined to visit fairs. A judicious distribution of this sum in *rewards of merits* is all that is needed. We do not hold to the giving of $1000 for the exhibition of a single animal, be they never so good. Such donations have a bad tendency—they encourage gambling, and dissipation, and many consequent evils. We have seen more than enough of these things; and hope the day has gone by when they will be countenanced by distinguished and discreet gentlemen. SENEX.

Jan. 17, 1857.

PLOWING WITH COWS.—A farmer in California states that he has plowed seventy-five acres this year with a yoke of cows. He says they are faster walkers than oxen—that they give milk, and save the expense of keeping another team.

For the New England Farmer.

HOW TO GET THE N. E. FARMER.

TO MISTER BROWN, THE PRINTER:—*Sir*—I don't write many letters to folks, because I never had much schooling, and if I want anything in particular, I always talk it right off the best way I can; but as I never get down to Boston, I want to tell you how I come to take your books. You see, I'd heard our folks a great many times talking about book-farming, and tell what they had heard say or read of the new notions in agricultural books and papers; sometimes it was about guano, and what tremendus great crops it would fetch; and then, agin, it was all about phosphates, or super-phosphates, or muriates, or something else that would make rich farmers; and it kind of stuck in my crop that I must stand by like a fifth carf, and not say a word, just because I hadn't read anything about it. I used, sometimes, as we sat chatting together, in the long winter evenings, tell my woman about what I'd heard say, and finally, says she to me—

"Dave, why don't you 'scribe and take them books?"

"Well, I don't know," says I, "only because I can't afford it; they cost a dollar a year, you know, and we have always been upon the principle that 'a penny saved is tuppence earned;' and in these hard times I can't afford to spend a dollar a year for farming books."

"Well, Dave," says she, "'many mickles make a muckle.' Now, let your wife contrive, for as the old saying is, 'where there is a will, there is a way.' You know, Dave, everything is high; our store goods are so dear, I haven't bought a new gown this winter; when we were first married, we used to sell our butter at ninepence a pound; and the best pieces of clear side pork out of our barrell to our hired help for ten cents a pound; our best fatted Thanksgiving chickens didn't bring us but six cents, and them real fat goslins, you sold them already dressed, for five cents a pound; and our hens' eggs, all we could get was six cents a dozen, and store pay, at that; and you know, as well as I do, that after working hard all summer, your potatoes wouldn't bring but a shilling a bushel." And so she kept on telling about what *had* been, till I got tired of it.

Says I, "wife, I thought you was going to show your contrivance; this don't look much like it."

"Well, well," says she, "'hold on to the hair, and run with the dog.' Now, Dave, if you railly want them books, I'd have 'em anyhow; and as to the pay, I'll tell you how 'a penny saved *is* tuppence earned.' Now, if you will only raise two bushels more of potatoes, this year, there is one dollar; one more bushel corn, there is another dollar; take a little more pains with your land, and get one more bushel of rye to the acre, and there's another dollar; four bushels more of turnips will pay for the books. So much for your side. Now, then, I can just as well raise three more chickens, and after being well fattened, I know Mr. Brown would give you the books for the chickens, if he has a family; and then he must have eggs for his children, and at the price, three dozen will about pay for it. And you know, our butter brings thirty cents a pound, now; you used to sell eight pounds to our neighbors for a dollar; there is a saving of four and three-fourths pounds, which is worth a dollar and forty-two cents, clear gain; so you see, your wife's contrivance is worth something, after all."

"Well," says I, "you are good for addition and multiplication; enough said. I'll go it, by ginger, for once. So I sent down a dollar by Squire Goodman, the representative from ower town, to have you send the *Farmer* books; this, you know, was last winter, and 'twan't long after this I got the first book for January. I sett right down and began to read; it was after supper, you know, and I read till wife says,

"Come, Dave, it's time to go to bed."

"Well," says I, "I always mean to do as my woman says, but I want to finish this story first; so to keep her good-natured, I began to read 'lowd. After reading the story through, 'there, Dave,' says she, 'that book alone is worth more than the dollar.' So I've got eleven more books coming for nothing."

Now, Mr. Brown, let me tell you, my wife's contrivance has helped me a great many times, since we paired; and, I am satisfied that in taking her advice in this matter, I have saved enough to pay for the books twice over, and have learned enough from your books to furnish me the means to give her a new silk gown, besides sending you the dollar for another year's books. The worst of it is, the neighbors all want to borrow them as soon as they come; now, if you print this, don't call any names—if you should, they wont come to our house again; but what I want, is this; to tell them how *they* can have the books and *pay* for them too, and show them the true way is, to make the farm pay for its own improvements. My woman says, "she shan't do without it, if she haves to take in washing to pay for it." So you must keep on sending it, till I tell you to stop. Till then ever yours, &c. ☞

THE CULTIVATION OF PUMPKINS.

A PRODUCTIVE VINE.

I noticed in a late number of the *N. E. Farmer* that mention is made of a very long pumpkin vine, that produced ten pumpkins, weighing one hundred and seventy-five pounds. I, last summer, treated a vine to experimental culture, which produced twenty-two full sized pumpkins.

I neglected to weigh them at the time of gathering; but from one of them of average size, that I have just now weighed, I judge the weight of the whole twenty-two to have been not less than two hundred and sixty pounds.

In the cultivation of this vine, the experiment was mostly made in pruning it. The soil, which was a light grey sandy one, mixed with vegetable matter, had no previous extra preparation. At the time of plowing, it was treated to a light dressing of poudrette, and plowed under; and another light dressing of the same was worked into the soil after it was plowed, and before planting the seed. The vine at first was allowed to run several feet, which it did without putting out but one pumpkin, although it bloomed beautifully. The end of the vine was then pinched off; by so doing, lateral branches were forced out from the main vine. These branches were kept clean, or nearly so, of side shoots and allowed to run from six to ten feet each, in doing which, each branch put out two or three pumpkins, when the ends of the branches were pinched off in the same manner as the vine had been. This process was continued, until it was no longer thought necessary to force the vine to cut out any more fruit, as it would probably not have time to ripen before the coming of frost.

This is by far the greatest number of pumpkins that I have ever known or heard of having been raised, from a single seed; and had they been of a large variety or kind, I have no doubt but that they would have exceeded in weight the produce of any one squash or pumpkin vine in the United States.—*Traveller.*

For the New England Farmer.

MILK PRODUCE.

MR. EDITOR:—I lately learned from Mr. N. P. C. Patterson, an intelligent and efficient laboring man, as any in this place, that when he had charge of the Burley farm, in Beverly, where were kept 40 or more cows, for their milk to be marketed, an exact account of which he kept and showed me, that the most he ever obtained from the cows was one gallon a day each through the year, which would equal about 5 quarts of the present straightened legal measure. I have also heard the late J. Nichols, of Salem, who kept about 40 cows on his farm, say that he never could obtain a herd of cows that would average more that 1¼ gallons from each cow per day through the year. So that *five quarts* a day may be set down as a full compliment from each cow, through the year. This, at 5 cents per quart, a fair estimate of prices, would be about $90 per year. Probably there are more herds that yield less, than more than this amount, though the same gentleman informed me, that he has now in his stable a cow that calved 20 months since, and gives 10 quarts of milk per day. From this cow he has taken milk that has sold for more than *two hundred dollars* in a single year. At the same time he remarked, that the quantity of milk to be expected from a cow, depended more upon the kind and quantity of feed they consumed, than any other consideration. P.

January 24, 1857.

For the New England Farmer.

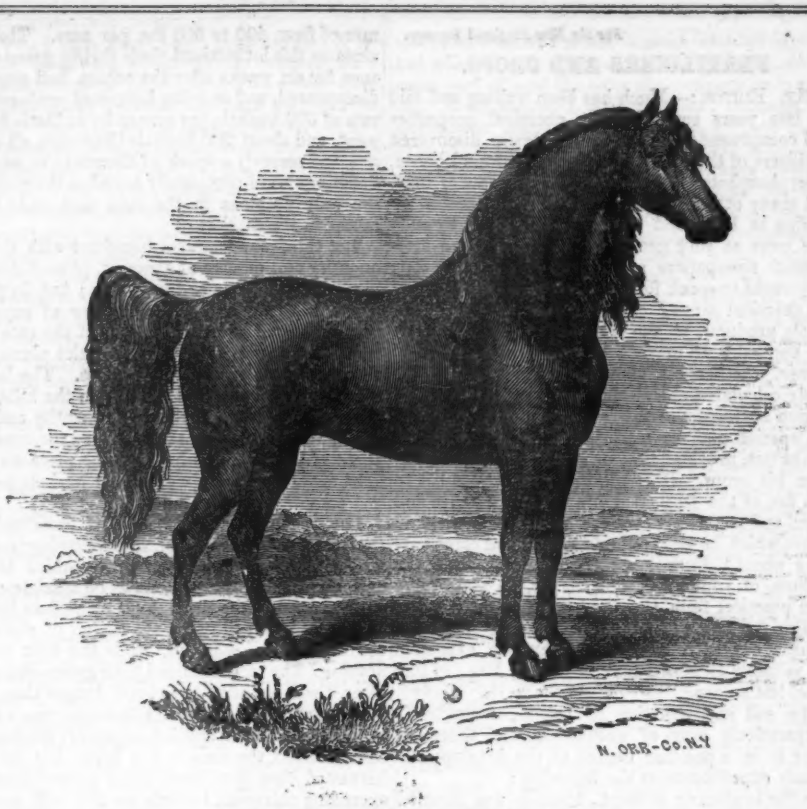
HEDGES.

A. R. Ober inquires where he can procure cuttings or plants of the Privet. Mr. Ober, like one-half of "the rest of mankind," omits half his post-office address, or I would answer his letter privately. Mr. William Hall, of Bradford, Mass., will furnish the Privet plants very cheap, a dollar or two per hundred. Mr. Ober inquires as to the soil and cultivation.

Line out your ground, and spade out a trench three feet wide, and fifteen inches deep, and fill it up with a rich soil. Set the plants one foot apart in a single row, cut them down to within two inches of the ground, repeat the cutting every spring, so that they will gain about eight inches a year in height, and you may have a regular, uniform, beautiful hedge, that may be cut as square as a birch, or in any other shape you prefer. And be sure to give your address, State and all.

H. F. FRENCH.

Exeter, N. H., Feb. 5, 1857.



GIFFORD MORGAN HORSE, JR.

There are few subjects relating in any way to the farm that are more attractive at present than those relating to the Horse. The recent exhibitions in various parts of the country where horses of blood and grades have been exhibited, tested and commented upon, has turned the *public attention* to them, and not that of the rural population alone.

We are glad to see this, and only hope that the zeal of our friends will be tempered with that prudence which they would recommend in regard to any other subject, where there *is* danger that a thing good in itself may be appropriated to improper uses.

Mr. LINSLEY, in his excellent work recently published, on the Morgan Horse, says the most casual observer of a good Morgan horse is conscious that he sees a peculiar animal. His short, light, rapid steps, point to the great muscles which give him motion. His prominent, clear, eager eyes, set wide apart, testify to his courage and docility—while his clean, light head, carried high, with short, pointed, sensitive ears, gives grace and elegance to every motion.

It is high time our horses were improved, for it costs no more—perhaps not always so much—to keep a good animal as a poor one. Quite one-half of all our horses are miserable, mis-shaped, stumbling hacks, who would be very unwilling to travel more than four miles an hour on a good road, but are always ready "to shy," run, or kick, when you have no occasion for it. They have bad blood and bad training. Some care and expense will correct both, and ornament our streets and farms with races that will be a credit to both.

The cut of Gifford Morgan, Jr., we borrow from Linsley's work. The horse is owned at present at Keokuk, Iowa.

CARROTS.—We have seen rich land which was deeply subsoiled for carrots, and the crop treated in the best manner, that produced, in our mind, a very unprofitable crop. The carrots were from 14 to 22 inches in length, but very thin and weighed very lightly. We also saw the same season, a crop, the ground on which it was planted was *not* subsoiled, and plowed only the usual depth for a root crop, which yielded a much greater amount in weight, though the carrots were scarcely more than half as long. The roots penetrated to the hard ground, then spread, and the carrot thickened. The labor of digging also was not more than half as much as the subsoiled crop.—*Germantown Telegraph.*

For the New England Farmer.

FERTILIZERS AND CROPS.

MR. EDITOR:—Much has been written and said of late years regarding the chemical properties and component parts of certain newly discovered fertilizers of the soil, such as guano, ground bones, superphosphate of lime, poudrette, muriate of lime, and many others; but instead of such articles requiring to be puffed off, year after year, by such able pens as they generally command in the agricultural newspapers and magazines of the day, they ought to speak for themselves in language that the practical farmer cannot misunderstand, by the effects produced on the various crops to which they are applied. It matters but little to the practical farmer, whether his manure is composed of the nicely calculated chemical ingredients so much in fashion amongst a certain class of amateur farmers, and special manure manufacturers, of the present day, or not, provided they produce no marked effect upon his crops. It is produce the farmer has to look for, at the least possible cost for manure and labor, and not a long string of chemical terms, and names which he neither understands, nor cares anything about. Permit me, therefore, through the medium of your interesting paper, to state some plain practical facts (for the benefit of others) regarding the result of experiments tried with some of these concentrated manures, on the extensive and valuable farm of Franklin Haven, Esq., of this place, last season.

The soil and situation of this farm render it comparatively easy of cultivation, and therefore adapt it in a peculiar degree to the development of such experiments as the following:

In the beginning of Sept., 1855, it was deemed expedient by the proprietor to have about ten acres of the extensive lawn which surrounds the Mansion House broken up, in order to leave the ground thoroughly cleaned and enriched by a course of green cropping preparatory to seeding down to permanent English lawn grass, it being pretty much exhausted by repeated cutting for over ten years, and run to witch grass and other noxious weeds. In the course of that month the whole was turned over by the Michigan double plow drawn by two yoke of oxen, and immediately harrowed so as to fill up all crevices. Next spring it was cross plowed with the common plow and one yoke of oxen, and thoroughly harrowed; but in many parts it was so completely matted and bound together with witch grass as to resist every effort to bring it to a proper tilth for small seeds. Consequently a portion of the worst of it was appropriated to the production of potatoes, manured and divided into lots in the following manner:

Lot first, about an acre in extent, received about eight cords of compost, one-third barn manure, and two-thirds seaweed and meadow mud, put in the hills in the common way, and planted with Chenangoes and Davis Seedling about the 1st of May. This lot suffered much from early drought, and turned out but a poor crop, seventy-five bushels to the acre, and considerably diseased.

Lot second was manured from the same pile with the same quantity per acre, but instead of receiving it in the hill, was plowed down broadcast; the ground harrowed and marked out into hills the same as the former; but before inserting the seed, each hill received a handful of *guano*, say at the rate of from 400 to 500 lbs. per acre. The potato vines on this lot retained their thrifty green appearance for six weeks after the others had completely disappeared, and on being harvested produced at the rate of 300 bushels per acre as far as Davis Seedling went, and about 200 bushels Chenango, all of good size, and scarcely a speck of disease to be seen. The Seedlings were completely sound to the core, being the only potatoes in the field that could be warranted in the market.

Lot third was manured broadcast with the same quantity and quality of compost, plowed down and harrowed the same as the former; but in place of guano received a liberal allowance of superphosphate of lime in each hill—say at the rate of five hundred lbs. per acre. The varieties planted were Danvers Seedling and Early Blues. The last four rows in this lot received nothing in the hills, and at harvesting turned out the same quantity and quality of potatoes as those that received the superphosphate of lime. The whole of the piece was but a light crop, not exceeding seventy bushels per acre, and considerably diseased.

Lot fourth was also manured broadcast, with twelve cords per acre, of the following compost, viz., two-thirds meadow mud, one-third seaweed, and eight casks to each cord of muriate of lime finely mixed in the usual way. The four last rows of this lot received half a shovel full of clear muriate of lime in each hill, while the first part got nothing. The vines retained their green color on this piece (half an acre in extent) longer than in any other part of the field, with the exception of those to which guano was applied, especially the four rows that received the lime in the hills; but on being harvested they produced but a poor return; not exceeding thirty-six bushels on the half acre, and those of a diminutive size and considerable rot. The varieties planted were Long Blues and Canterbury Seedling. The four rows that received the muriate of lime had nothing in particular to distinguish them from those that got none; only that they retained their green appearance a little longer, but the quantity and quality of the potatoes were about the same.

The other portions of the ground (about four acres in extent) were prepared for rutabagas in the following manner, viz: after being cross plowed and thoroughly harrowed this spring, exactly two acres of the piece was found to be so incumbered with witch grass that every effort failed to bring it to a proper tilth for depositing the seed in the common way by the machine in drills or rows. The only expedient left, therefore, was to have recourse to planting in hills; and in order to prepare the ground for that operation, the manure, composed of one-third meadow mud and two-thirds seaweed and dung of cattle, in equal proportions, well mixed, was spread broadcast, plowed in, and harrowed; in quantity fully eight cords to the acre. The ground was then marked off for the hills; placing the rows 2½ feet apart, and the hills in the rows from 14 to 20 inches distant from each other. Each hill received a good table-spoonful of guano which was lightly covered by the foot of the man who deposited the seed, and the seed in its turn, covered by a swing of the other foot in the opposite direction, as quick as thought. Thus the two acres were planted and manured in the hill with guano by three men in one day, in the last week in June.

The seed germinated quickly, and the young

plants would have made rapid progress had it not been for the ravages of the fly; in consequence of which nearly one-half had to be sown a second time; thus retarding the general progress of the piece considerably. By the end of July, however, the field had acquired a uniform appearance; and such was the rapidity and luxuriance of the growth of these turnips that received the guano that they attracted unusual attention and admiration in this section of the country, and by their excluding light and air from the ground by the thickness of their foliage, completely extirpated every particle of witch grass; an object the accomplishment of which is esteemed by the proprietor of infinitely more value than the large crop of turnips. But to cut a long story short, suffice it to say, that these two acres on being harvested, produced forty-eight tons of turnips after being divested of roots and tops, or about 850 bushels per acre—all sound and handsome, and of extraordinary size.

The remaining two acres appropriated to rutabagas being comparatively free from witch grass, were prepared for sowing in drills, or rows, with the machine. The ground was divided into four equal lots, one-half an acre each, and manured as follows, viz:—

Lot first received six cords stable manure, seaweed and meadow mud in equal proportions, plowed down broadcast. The seed was sown in rows two feet apart, perfectly straight, and equi-distant; but although they came up thick and strong, their progressive motion was slow compared with those on the two-acre lot that got the guano. When harvested the half acre produced seven tons of ordinary sized turnips, clean and handsome, but considerable of them inclined to rot at the top.

Lot second was treated in exactly the same way as regards compost, &c., but in addition received two hundred of superphosphate of lime put into the drills with the hand before depositing the seed. During the season no marked difference was observable in the appearance of the tops; but on being harvested produced eight tons of very handsome, sound turnips of medium size.

Lot third received the same amount of compost and ten bushels of ground bones in the drills with the seed, and produced nine and a half tons of clean, sound turnips of good marketable size.

Lot fourth, being the last, was manured with the following compost, plowed down broadcast, viz: six cords meadow mud mixed with twenty-four casks of muriate of lime thoroughly pulverized. The turnips on this lot had rather a sickly appearance during the season, and produced, when harvested, only four and a half tons, and of inferior quality, being small and stringy, with strong indications of disease.

Judging from these results, as well as from many former experiments of the same kind I have arrived at the conclusion that concentrated manures in general are applied in too small quantities to produce the desired effect; and except their prices in the market can be much reduced from what they are at present, their extensive use as fertilizers of the soil is yet of extremely doubtful expediency.

In 1855 I manured for beets with twelve hundred of guano to the acre, and had an extraordinary large crop; and on the adjoining lot, I only applied three hundred per acre, the usual quantity recommended, and they were scarcely worth harvesting. With twenty-four barrels of ground bones per acre the same season, I raised a great crop of carrots; but where I only used ten bushels per acre, on the same sort of land the crop was comparatively nothing. Last season I had excellent cabbage and cauliflower with poudrette alone, applied at the rate of forty barrels per acre. Also, superphosphate of lime, where I gave an ordinary shovelful to each hill, or at the rate of two tons per acre; but where these were applied in the prescribed quantities of the manufacturers, the crops were a complete failure. Much depends, however, on the state of the ground to which these are applied, whether it is poor or rich, and with what it was cropped the previous season, &c., &c. But taking all things into account, it is decided beyond a doubt, and established by rea. practical experience, that the manures above mentioned, with the exception of ground bones, are nothing more than stimulants, and have no lasting effect. Even guano itself, which takes the foremost rank, and although a vigorous fertilizer, its effects are all gone with the first crop it produces. On the lot of beets that received twelve hundred to the acre and that which received only three hundred there was no visible difference in the crop of rye that succeeded them; the whole being a miserable concern, both as regards straw and grain, scarcely worth harvesting. Whereas, alongside of it, where the ground received twenty-four barrels of ground bones per acre the previous season, and produced a large crop of carrots, the rye was a most luxuriant crop; over forty bushels to the acre, and the straw of first quality, being tall and clear. On the part that received ten bushels per acre, the grain was good, but the quantity comparatively small; twenty-eight bushels per acre, and the straw of moderate length. Other portions of the ground had received a liberal allowance of barn manure for the previous crop, produced good rye, but not near so good as that which received the greatest quantity of ground bones. Still from the result of many experiments, I am ready to admit that along with barn manure the greater part of these concentrated fertilizers may be profitably employed in producing early crops, even when applied in small quantities; and especially guano, which is certainly a most powerful auxiliary to market gardening, and no one following that business ought to be without it. F. C.

Beverly West Beach, Feb. 5th, 1857.

For the New England Farmer.

ICE AND MILK HOUSE.

Below find a description of an ice and milk house, that works well.

The outside house is 32 feet square, the frame consists of 8 posts on each eave side, and 2 on each gable end, 8 inches square, with a stone the same diameter of the post or larger, 2 feet below the ground, and 6 inches above, and a dowel pin from the end of the stone to the end of the post. Plates 6 by 8, with 4 joist stretching from post to post, say 32 feet long, 3 inches by 12, the centre ones running only to the centre house in which the ice is placed. The ice house proper is 16½ feet square, with an inside shell 12½ feet square, 14 feet high, the space being 2 feet, filled with tan bark. The bottom is water-tight, with 3 inches descent to centre gutter, which also descends 3 inches, and at the lowest end a ¾ in. diameter copper pipe carries it through the

two shells and tan bark, with the end of the pipe turned up sufficiently to keep the pipe filled with the waste water, to prevent the air from passing into the ice. In the space between the 16½ feet shell and the 32 feet house, is formed a trough out of brick and cement, where we keep milk; in the lowest end of the trough are 2 copper pipes, one at the surface, the other at the height I want the water to reach, which is open, the lower is kept corked, save when the trough needs to be washed, the two pipes discharging into an underground drain. Thus we have had ice in abundance, and about one cord left over, and a stream of water colder than any natural spring, and perfectly controlable. The other 3 spaces between the outside and ice-house proper are used for a carriage-house and wood-house.

Locust Lawn. T. H. COLLINS.

REMARKS.—We are not able to refer you to such a barn as you inquire for in another part of your letter.

For the New England Farmer.

EGYPTIAN MILLET.

MR. EDITOR:—Franklin H. Williams, of Sunderland, says the Springfield *Republican*, writes to the *Homestead*, in favor of Egyptian millet for green fodder. He represents it to be very profitable, growing ten feet high, if it is not disturbed by the scythe, and sprouting from the root immediately after it is cut, and can be mowed four times in one season. Mr. Williams has raised it in the Southern States. I wish to know if it has ever been raised in the Northern States. What is the appearance of the plant and what are its characteristics? To what kind of soil is it adapted? Is there any kind of plant by the name of millet which has been successfully raised in the Northern States? If you or any of your subscribers or correspondents can give me information on this subject, I should be much obliged.

I have been much interested in your article on "Feeding Cattle," in which you notice the manner in which Mr. Horsfall, of England, manages his cows. I am anxious to know what feed for cows is best adapted to increase the quality and quantity of their milk. Mr. H., it seems, gave two quarts of bran meal to cows in full milk, but to those which gave but little milk, he gave little or no bran meal. Are we to conclude from this, that he considered bran meal the best food to promote the secretion of milk?

He fed also rape cake, an article generally used for manure, but which, by being steamed with the bran, &c., is rendered palatable. What is rape cake? How does it look, and how is it produced?

Mr. H.'s principle was, that substances rich in albumen, oil, phosphoric acid, &c., were best calculated to produce rich milk. Can any one tell me what those substances are? Perhaps, Mr. Editor, you can give us an analysis of those articles of food which New England farmers generally have, and then we can apply Mr. H.'s principle in making our selection. W. W. BALDWIN.

West Granville, 1857.

REMARKS.—At the earliest moment we can command, we will reply as well as we can to these interesting inquiries.

LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE FARMER BY H. E. ROCKWELL.]

The *Fifth* of the series of meetings of the Legislative Agricultural Society was held Tuesday evening, agreeably to usage. Hon. MARSHALL P. WILDER was called on to preside. Mr. WILDER spoke directly of the subject to which the attention of the meeting would be called viz., a lecture upon the Chinese sugar cane, and after referring to the origin of the plant, he stated that, although it was now for the first time coming into notice, it had been known for many years to a few Europeans, and the fact that it had been long cultivated in the north of China was known to some of our own ship-masters. He had no doubt that it would be more generally cultivated the coming season than any other new agricultural product. It has the advantage over sugar cane in being raised from seed at a trifling expense. The seed may now be obtained for one dollar a pound, and that would be sufficient to plant an acre. It is well adapted to a northern climate, and thrives as far north as Minnesota. Mr. Wilder exhibited a very fine sample of the syrup made by Mr. BOYLSTON, the editor of the *Farmer's Cabinet*, Amherst, N. H. The names of several others who have cultivated it with success were also given. It has been cultivated in South America and Liberia, and has been tested here as food for milk cows, and found to increase their milking qualities, and at the same time to increase their flesh. There are many varieties of the plant, some of which are very large, and require one hundred and thirty days to ripen; but that which has been introduced into this country requires only about seventy-five or eighty days. Mr. Wilder then introduced Mr. HENRY S. OLCUTT, of the Farm School, Westchester, N. Y., as the lecturer of the evening.

The lecturer first spoke of the plant with reference to its qualities for a forage crop. Every farmer could not make sugar from the plant, nor even syrup, perhaps; but if it was found to be a very valuable plant for fodder, that would be a matter of importance for farmers to ascertain. The seed as well as the stalk is valuable for fodder; and it may prove that it can be cultivated for the seed in part, as good for horses, with as much profit as barley. There is no doubt that much excitement is likely to arise in regard to this plant, and there is danger that many may receive such extravagant notions in regard to it that they will in the end be disappointed, and denounce it as a humbug, merely because they allowed themselves to be led away by too high ideas in regard to it. The lecturer gave a description of the general appearance of the plant in its different stages of growth. The plant, as cultivated at the Farm School, averaged eleven feet in height the last season,

though some grew as high as fifteen feet. The plant may be not only produced from the seed, but the roots may be protected so that it will grow several years, and thus it may be called a perennial. If sown in drills like corn, the product will be much like corn; if sown in April it will be five feet high in July, and may be cut as fodder, and the stubble will spring up and give a second crop in October, thus producing twice as much as corn in our latitude. Mr. D. J. Browne, of the Patent Office at Washington, says that five cuttings have been made in Florida the last year, and that three cuttings were made in Georgia. The weight of the crop when green has been as high as 83,250 pounds per acre. In the hot and dry part of the summer season, when corn droops and folds up its leaves, the Chinese sugar cane grows even more vigorously. It grows slowly at first, but will soon outstrip every species of corn. Although it may be produced the second year from the roots of the former year, that is not recommended as the best way of cultivating it; it is better to plant the seed every year. The soil should be plowed deep, using the subsoil plow, and the earth between the rows should be stirred deeply during the season. When sowed in drills the rows should be three feet apart, and from sixteen to twenty seeds dropped to a foot, covering them about half an inch only. It is well to steep the seed in a weak solution of saltpetre for twenty-four hours, and then roll in plaster before sowing. Bone dust, genuine guano, superphosphate of lime and wood ashes are all valuable as manures for it. Great care is required to cure it in the fall. It should be cut when the temperature is from forty to forty-five degrees.

As to its value as fodder for milk cows, Mr. Whitney, of Washington, had found it to increase the cream but not the quantity of milk; but Mr. Richardson, of Townsend, Mass., found it valuable to increase the quantity of milk as well as the quality. It is especially adapted to fattening stock, and will be a mine of wealth to graziers, said the lecturer. It should be cut and dried a few days before it is fed, as it scours animals too much to feed it green. It should not be planted so thick as some have recommended. In an experiment where it was planted two feet apart, and six stalks to a hill, an enormous growth of stalks was obtained, but the whole was blown down because too frail to support itself. In another case where it was planted four feet apart, and only from two to four stalks in a hill, it stood well, and every stalk ripened.

The seed and its uses were next spoken of. When ripe, the seed is of a dark purple color, and it may be stripped from the stalks by a broom corn machine. Horses and poultry are very fond of it. There is little doubt that the seed may become, in a short time, as plentiful as oats, and for various purposes, it will be found more valuable. Col. Peters, of Atlanta, Ga., obtained twenty-five bushels to the acre, which weighed thirty-six pounds to the bushel. Some specimens of the seed have been known to weigh forty-eight pounds to the bushel. From the hull a fine carmine color has been obtained for dyeing. The lecturer exhibited several specimens of coloring matter that he had obtained from the seed, to show the possibility that the coloring property of the seed may prove a source of additional value to the plant. Another of the properties of the seed, for which it is believed it may be of great value, is the large quantity of alcohol which it contains. There may also be obtained from the stalk a kind of gum, which, when mixed with purified tallow, burns with a clear, brilliant light—and is used for the purpose of lighting apartments in the north of China. The lecturer exhibited some of this prepared gum, and ignited it to show its illuminating power; at the same time he expressed doubts whether it could ever be obtained in such quantities and with such facility as to make it profitable. But as a source of alcohol, the seed will probably prove very valuable. From sixteen to twenty per cent. may be obtained from it. The alcohol thus obtained has been sold in the market of Marseilles, without exciting the suspicion that it was not derived from the common sources. If this plant can thus be made useful, should we not, as philanthropists, and on strict grounds of political economy, desire that it may take the place of our present cereals for this purpose, so that our wheat, corn, rye and barley may be saved from an unworthy fate, and become more plentiful as food for man and beast? Vinegar also, in considerable quantities, may be made from the stalks after the juice has been expressed. Mr. D. J. Browne, of the Patent Office, says fifteen hundred gallons of vinegar may be made from the product of one acre.

The value of the plant for the production of sugar only, was next spoken of. The proportions of the crystallizable syrup contained in the plant depend much upon the latitude and upon the dryness or moisture of the soil where it is cultivated, and also, still more upon the processes of manufacture. The plant thrives best with a hot sun, and on a moderately rich soil. To produce the greatest amount of sugar, the stalks should have the seed pannicles cut or broken off before they come to maturity, in order that the vigor of the plant may be concentrated in the production of sap in the stalk. The amount of saccharine matter contained in the stalks varies from fourteen to twenty per cent. The per centage, by weight, of the sap, depends upon the mill. Eighty-four and a half per cent. has been obtained, and seventy per cent. should generally be expected. Supposing that ten or fifteen per cent. of this is sugar, the valuable properties of the plant will at once be seen. Some of the processes for ex-

tracting the sap in a small way were stated. The cane may be cut in small pieces and boiled, and its virtues thus extracted; but that is not a desirable method, because the sap thus obtained will be flavored with other properties of the stalk, which will necessarily be boiled out together with the sap. The syrup has been made from cane raised in thirteen States and Territories, from Vermont and New Hampshire on the east, to Minnesota on the west, and Louisiana on the south. Col. Peters, of Ga., obtained 468 gallons from an acre; his average product was 407 gallons per acre. With proper machinery for expressing the juice, the product may be at least 570 gallons per acre. Col. Peters will plant this year from 150 to 200 acres. There is little hope that the cultivation of the plant for sugar can be as profitable at the North, as at the South. There, one thousand pounds per acre may be produced, and it will ripen two or three months earlier than the common sugar cane. At the North we should confine ourselves to raising it for fodder principally, and for the seed as a source of food to animals, or for the production of alcohol.

The processes for the manufacture of the syrup and the sugar, as giveu by Prof. Mapes, were read; but they were too lengthy and too minute to be given here. In closing, Mr. Olcutt said he had not designed to raise too high expectations in the minds of farmers with regard to this plant. He merely wished them to take to their homes the fact that a really important economic and industrial plant has been brought within the reach of the American agriculturist, and that judging from the past, we may be satisfied of the certainty that it will be in various ways a profitable acquisition.

The satisfaction of the audience was expressed by applause at the close of the lecture.

Simon Brown, of Concord, remarked that the interest felt in the subject of the lecture was indicated by the unusual number of persons present this evening; the hall was quite well filled. He had been instructed and interested by the lecture, and he moved that the thanks of the meeting be tendered to the lecturer for his minute, highly interesting and instructive lecture; and it was unanimously carried.

J. F. C. Hyde, of Newton, was called upon by the Chairman to speak upon the subject. He said he had given his views to the public in the form of a little book. He believed two things in regard to the Chinese sugar cane to be definitely settled. As a forage crop we have nothing to compare with it; two crops may be obtained in the same season in Massachusetts, when sown for fodder. He had never been able to obtain two crops of sown corn. Drought does not affect it in the least; when corn droops and rolls up its leaves, this plant grows with more than usual vigor; if sown the first of May, the cutting may commence early in June, when it will be two or three feet high; and when the field has been cut over once, the cutting may commence again where it was first cut. Another thing fully established is its value for syrup; the syrup is as easily made as toast or porridge. That which the lecturer had exhibited this evening as made by Col. Peters, of Georgia, was the poorest he had seen. Mr. Hyde fully agreed that the seed was valuable for fodder—quite as good as oats; he wished, however, to use a word of caution; there might be danger of too extravagant ideas of the value of the plant. One gentleman in Pennsylvania had written to him that he should plant eighty acres this year. He has no machinery and no facilities for making the syrup, and I begged him not to do it, said Mr. H., because I felt that he would fail to realize his expectations, and would then denounce the plant. Mr. H. said he should plant an acre, and should procure some of the best machinery for making the syrup, and so far as he could, should make thorough experiments of the value of the plant for syrup and other uses, not with the idea of making it profitable to himself, but that the public may have the benefit of the experiments. He did not believe sugar could profitably be made at the North from this plant, but he hoped the matter might be thoroughly tested. Some had said that cows would not eat the stalks; but he had seen a cow take a cane stalk nine or ten feet long, and commence chewing at one end, and chew it to the other without dropping it; she evidently liked it. His cows would pick out all the cane stalks from a pile of corn and cane before they would eat the corn stalks. If cut fine, horses will eat the stalks as greedily as they will eat shelled corn.

Mr. Wilder, the Chairman, expressed his gratification at the very full attendance at the meeting, and his satisfaction with the lecture, taking occasion also to offer a word of caution against too sanguine hopes, and at the same time giving ground of encouragement from the fact that the plant has been cultivated so extensively within a year or two, and that there has not been a failure in any case. The meeting was adjourned to next Tuesday evening, when the subject of discussion will be "*Manures.*"

SALT FOR SHEEP.

The first thing the shepherd in Spain does when his flocks return from the south, the summer downs, or pastures, is to give them as much salt as they will eat. Every owner allows to each thousand sheep, 2,500 pounds of salt, which they consume in about five months. They eat none in their journeys, nor are they allowed any in winter, as it is thought to produce abortion when given to ewes forward with young. This has been the custom, and it is thought to be the true reason why the Kings of Spain could never raise the price of salt to the height it has maintained in France; for it

would tempt the shepherds to stint their sheep, which it is believed, would weaken their constitutions, and deteriorate their wool. The shepherd places fifty or sixty flat stones at the distance of about five paces apart, strews salt upon each, leads the sheep slowly among them, and every one is allowed to eat it at pleasure. But when they are feeding on limestone lands, they eat no salt; and if they meet with a spot of mixed formation, they are said to partake of it in proportion as the soil is mingled with clay.—*Wool-Grower.*

OBSTRUCTIONS IN WATER PIPES.

To remove obstructions in water pipes. Lead pipes, conveying water from springs, especially if small, often become obstructed. We give several methods which we have successfully employed to clear them, without the necessity of resorting to an air-pump.

As water is nearly incompressible, if a tube is full, pressure upon the water at the end will be felt through its whole extent. By applying the finger forcibly to the end when it is full, the power will be communicated through the whole length, and slight obstructions may thus often be started from their places.

When this fails, if the end of the tube can be reached, we apply the mouth and blow as hard as we can. If the tube is full of water, and there is a perfect stoppage in any place, we cannot blow in at all; the water will not move; but if it is only some loose substance, its position being changed, it will often flow out.

Our next resort is to a piston made of hickory, with tow or cloth securely fastened on the end, just large enough to fill the tube. Very great power may be exerted with this, by moving it briskly back and forth, in the end of the tube. We should prefer the lower end or outlet of the tube for these operations, as a slight backward pressure will more readily start an obstruction from its place.

Another way still. Take a tube several feet in length and fit it on tight in an upright position, to the end of the aqueduct pipe. By the aid of a tunnel pour water into this tube, and as the pressure of the water is in proportion to its height, and not quantity, a few quarts will exert great force. Obstacles that would only be removed a few inches by any of the other methods, may be washed out entirely by pouring water in this way from the upper end. If the two tubes are of the same size, the end of one may be hammered or shaved off so as to enter the other at a short distance. The joint may be made sufficiently tight with a little tallow or grafting wax and tow.

FROST.—*In Sink-spouts and other tubes,* which are nearly perpendicular, ice may be thawed, when you cannot easily reach it with hot water, by putting in a little fine salt. In a few days it will work its way through several feet of ice, settling in the water as the ice melts. We have thus thawed the ice in an aqueduct, in very extreme weather, by putting salt into the ventilating or air pipe.

Another method. When the tube is large, the following is the most rapid plan. Take a tube small enough to go inside of the one to be thawed, and hold it upright with the lower end on the top of the ice. Pour hot water into the smaller tube, and as it runs out at the lower end, it will rapidly thaw away the ice before it.—*The Homestead.*

EXTRACTS AND REPLIES.

TOP-DRESSING.

I do not recollect reading anything in the *Farmer* especially to the point, of the application of stable manure as a top-dressing for mowing lands, and I, for one, lack information.

If I let the manure made during the winter lie until fall, I lose the use of it one year, and a good deal more, probably, by evaporation. If I apply in the spring in a crude state, I undoubtedly lose much, and if I undertake to compost during the winter, although the manure is in a cellar, it freezes when the mercury is thirty below, and the muck for composting freezes too, so that the material cannot be well mixed. And then, too, to apply early in the spring interferes with the usual spring work, and the mowings are too soft to cart over. After about the 20th of May, there is usually more leisure to attend to it, but then the grass being considerably grown, is it not an injury to it to trample it and cover it with manure? If applied at this time, unless very thoroughly mixed with muck, and pulverized, much of it wastes by drying, and is brought back again to the barn in haying time. And as to its being composted, with the hurry of the spring work there is but little time, after the frost is out so that the manure can be easily worked, to compost it, before the first of June.

Whately, 1857.

REMARKS.—The best mode of top-dressing is to keep the manure fine that is made after planting, compost it thoroughly, and apply it in the autumn. Some apply it as soon as the grass is cut—others later. But top-dressing is of little value, except on naturally moist lands, and on such, we have no doubt, all things considered, the autumn is the best time to apply it.

SOILING CATTLE—BONES.

Being a constant reader of your valuable paper, I should be pleased to see in its columns some suggestions relating to the soiling of cattle. I would ask what plants will produce the earliest fodder, and what other plants are best for the purpose of soiling? Why would not such a method of summering cattle be most advantageous to many on the Cape, that are farmers on a small scale, and have but small and stinted pastures?

Will you tell me how bones can best be applied to land in a region where there is no mill to grind them? A. D. M.

Hyannis, Cape Cod, 1857.

REMARKS.—Soiling is an interesting question to most of us in Eastern Massachusetts, and we hope some one having experience will reply.

Bones may best be dissolved by the use of sulphuric acid; the acid itself being a good manure. See monthly *Farmer* for 1853, pp. 274 and 551; also for 1854, pp. 186, 299.

SUGAR CANE SEED.

To A. E. P., *Springfield, Vt.*—Nourse & Co., 13 Commercial Street, Boston, will furnish the Sugar Cane seed in any quantity you may desire; for ten or one hundred acres. The retail price is $1,00 per pound. See advertisement in this paper.

DRAINS—APPLE TREES ON LIMESTONE LAND.

I wish to underdrain a piece of ground for a fruit or vegetable garden; is it necessary to have an *outlet* for the drains?

Underlying this ground (1½ acres) is a bed of limestone rocks, about four feet from the surface; is it, on this account, unfavorable for fruit? J.

Shelburne, Vt., 1857.

REMARKS.—Limestone lands are often very open underneath, and water would find its way out in most cases; but the operation of the drains themselves will soon decide whether an outlet is necessary.

We do not think the presence of the limestone rocks so far from the surface would have an unfavorable influence upon your trees.

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A FRUIT ROOM.

Can you not give your numerous readers a plan of the fruit room such as you describe in your February number of the monthly *Farmer*, with such further comment as would be of use to one building such an apartment?

Feb. 8, 1857. JAMAICA PLAIN.

REMARKS.—We are not able to do so. Messrs. Flack, Thompson & Brother had one in operation near Fairmount, Philadelphia, a few years since, and may be able and willing to furnish the desired information.

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GRASS SEED SIEVES—HORSE RAKES—WHEEL HOE—HORSE HOE.

Can you tell me where I can obtain grass seed sieves for hand labor, and the price; those suitable for red-top and herds-grass?

Of the several horse rakes, which do you consider preferable, all purposes combined? I have a predilection for the old revolver.

Can you inform me respecting the price of the wheel hoe?

Are there any implements styled horse hoes in existence? H. M. N.

REMARKS.—The sieves you inquire for may be found at NOURSE & Co., 13 Commercial Street, Boston. Price, $1,00.

We like Delano's Independent horse rake better than any we have used. It rakes clean, is easy for boy and horse, and seldom gets out of order.

A wheel hoe costs from 75 cts. to $1,50.

There are two or three kinds of horse hoes, and they are excellent articles.

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TO DRESS SKINS WITH THE WOOL OR FUR ON.

Take two table-spoons full of saltpetre and one of alum; pulverize finely, mix them and sprinkle evenly over the flesh side of the skin. Then roll the skin together, and let it remain a few days, according to the weather. Unroll and scrape them with a chip, dull knife, or draw them over a board fence, until they are dry, soft and pliable.

We republish this from the last October number, at the request of two or three correspondents.

FOWL MEADOW GRASS SEED.

Will you please to inform me when is the best time to sow fowl meadow seed, and how much per acre? How is the best way to get it covered?

Warren, 1857. S. E. T.

REMARKS.—We have never used this grass seed, but upon inquiry learn that August or September is the best time to sow it, and that from two to three pecks per acre are used. It can be well covered with a good brush harrow, if the land is light, or finely pulverized.

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SEED OF ARBOR VITÆ.

In answer to "C. W. Sanders," I would say that the seed of the arbor vitæ ripens and should be gathered in the latter part of August or September, and should be sown as soon as convenient in a cool, shaded, moist location, with very little or no covering, that being the way that nature does the work. The young plants grow very slow for the few first years, and any one about to make a plantation of them would do better to procure young trees from six to twelve inches high, and set them in cool, moist ground, and if partly shaded it would be better. B. F. CUTTER.

Pelham, N. H., 1857.

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HOW TO RAISE ONIONS.

In reply to the inquiry of a "Subscriber" found in your last paper, we would say that good onions may be raised with very little trouble, if they are watered two or three times with strong tobacco water when four or five inches high, or at other times, if the maggots are devouring them. We have tried this remedy several times with great success. H. & J.

Jericho, Vt., 1857.

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COSSETS WITH YOUNG CATTLE.

I send you a few facts about two cossets that I bought four years ago last spring. From one of them I have sheared 25 lbs. of wool; she has raised nine lambs. From the other, I have sheared 30 lbs.; she has raised eight lambs. The wool I have sold for 34 cts. per lb.; I have sold fourteen lambs for $3,00 each, and three of them for $2,50. I think that a few cossets may afford a handsome profit. H. M. P.

Ludlow, Feb. 4, 1857.

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COST OF KEEPING A PIG.

I wish to inquire of you or some of your subscribers, through your paper, what the expense would be to keep a pig from six weeks old, for twelve months, the pig to be kept upon Indian corn meal made into dough, or suitable swill, according to the age of the pig? the pig to be fit for market at the end of the time. O. S. K.

Boylston, 1857.

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TOMATO DESSERT.

Did you ever try tomatoes prepared in the following manner? They make a rich dessert for dinner or tea.

Take well ripened yellow tomatoes, peel them, slice thin, and put them and crushed sugar in alternate layers; let them stand a few hours and serve

with rich cream. Most persons who are fond of raw tomatoes relish this dish very highly.

Chester, Ill. J. H. I.

For the New England Farmer.

CABBAGES---HOW TO GROW?

MR. EDITOR:—A subscriber will find an answer to his queries, as to Mr. Hathaway's crop of cabbage, on pages 100 and 101 of Essex Transactions for 1856. There can be no doubt of the truth of what is there said; I am assured of it by his neighbor Ware, who knows all about growing fine crops. These Marblehead boys are not to be beaten, except by those who rise early in the morning—and some of them, at all times, tell stories entirely worthy of credit.

To begin with, their soil is first-rate; their facilities for obtaining manure ample; and their diligence is equal to their facilities. I have often seen their fine cultivated fields along the shores of the Bay, bounded by the overhanging cliffs, that have withstood the surges of the waves for thousands of years. They have their own manner of growing the cabbage. After the ground is fully and completely prepared, they plant where they expect the plant to grow, and when up, they thin out, leaving just enough to cover the ground when grown. In this way I have seen from four to six thousand heads, of the *drumhead variety*, growing on a single acre,—some of which weighed nearly 50 pounds—averaging at least 25 pounds. If any one would be better informed on this subject, I would advise them to go in the month of September, and look for themselves. I have no doubt a larger amount of nutritive food for stock can be grown in this way than any other. There are other cultivators, along shore, in Lynn, Beverly, &c., that grow equally good crops. Whoever would have good crops, must plow deep, manure full, and learn to use the shovel and the hoe, and not be sparing of *elbow grease*. It takes *raw boned, firm muscled* fellows, to do these things well. P.

South Danvers, Jan. 27, 1857.

For the New England Farmer.

HAMPSHIRE AGRICULTURAL TRANSACTIONS.

This young society seems to have come into being full grown, and to have gone ahead of many of the older branches of the family, in the size and substance of its transactions. The first thing that arrests the attention, on opening their book, is the unprepared address of Dr. Hitchcock. If such things can come without preparation, what might be expected of a labored effort. We have rarely read anything of the kind that pleased better. The description of the Christian farmer, on page 22, is strikingly beautiful. "What spectacle can be more impressive, than to see the well-ordered and affectionate family, bowing in unison at the still hour of the rising sun, around the domestic altar, and to hear the hymn of praise from sweet voices, stealing softly through the morning air, hallowed by the tones of prayer from the reverend head of the family."

Who would not be a farmer under such influences? Our memory brings to view many such instances. Contrast this state of things with the noise and bustle of the city—with the profanity and vulgarity that meet you on every side.

We have glanced our eye hastily over the other papers in this well-arranged pamphlet of nearly 100 pages, and have no hesitation in saying that they all bear marks of the skill and adroitness of the hand that "prepared" them. For ourselves, we admire occasionally the substantial, but less savory dishes cooked by the farmers themselves. In truth, we like *real* better than *fancy* farmers, *hasty pud ding* better than *fricasees* of any description.

AGRICOLA.

For the New England Farmer.

POULTRY AND ITS CARE.

MR. EDITOR:—I was recently asked by a friend, what I would give him for his hens? Said he, I last fall was at a great deal of trouble and expense to obtain a good breed of fowls, and notwithstanding they have had all the corn they would eat, they lay me no eggs. I said to my friend, will you show me your hens, and where you keep them? He said that when he last had hens, he kept them shut up, and they laid no eggs, got lousy, and picked the feathers off themselves, and his neighbors told him that he must let them run if he wanted eggs, and this time he had let them run. He was careful to keep them out of his barn, as he believed they scattered their lice on the cattle. He led me to a shed that opened to the east, 8 by 12 feet, on the west or back side of which were large cracks of one-half inch or more between the boards, and in a corner of which were placed some poles for roosts. "There," said he, "are my *Bolton Grays*, some on the roosts, and some on the ground; (or manure, for the manure was thrown out of the barn under the shed.) I said to him, "where is their dry earth and ashes to wallow in, and gravel to grind their food with?" He put on a doubtful look, and said, "do you suppose it necessary for a hen to eat dirt, that she may lay eggs?" I said, "Mr. ——, I have got as many hens at home that lay, as you have that do not; we will exchange; in ten days time, your fowls transferred shall lay, and mine that you have, will not." In a few words I explained to him what was necessary to do. First, provide them with a warm place in the barn, not over the cattle, but behind them. Provide them with fresh water every day, plenty of food which must be varied, such as corn, buckwheat, oats, and an occasional dish, in a cold morning, of warm cob-meal dough; also, raw carrots pulverized, two or three times a week, together with fresh meat, and lastly, to grind their food and make an eggshell, you must furnish gravel stones, and oyster shells. I left, which was some eleven days since, and yesterday called again. I inquired after the poultry. "Why," said he, "I this day sold my first two dozen of eggs for forty cents per dozen, and the hens are doing finely."

I obtained permission of him to state his case in the *Farmer*, providing I gave no name, for the benefit of others. Thus it is, that folks think hens and corn in summer produce eggs, and why not in winter? What would be thought of a farmer, who should pay an extra price for a cow, take her home, tie her up in a cold barn, or shed, feed her on hay alone, turn her out to lap snow for drink, and deprive her of her teeth, and expect to obtain much milk. I think our friend himself would say it was

absurd, but not a whit more so than the keeping of his hens.

The fact is, Mr. Editor, hens require attention, like everything else, and properly provided for, are one of the most profitable and convenient sources of comfort and luxury that a family can possess, be they rich or poor. No family should be without them. They eat the remnants of the table, (barring the salt,) and a young hen will lay 200 eggs per year, with the trouble only of feeding her, and picking them (the eggs) up. H.

For the New England Farmer.

LANDSCAPE GARDENING.

The primal object in the arrangement of roads, paths and trees connected with a dwelling, is convenience; the second is beauty, both from the house and from the public street. To unite and harmonize the two is the object of landscape gardening.

Cultivated taste, more generally, I think, discards straight lines; but they are frequently very convenient, almost indispensable, and can be made to offer contrast and beauty to the eye, where circles and irregular diagrams are at the same time visible. Take an acre or a half-acre lot; it is generally a parallelogram. The public road runs at a right angle, and so with each other do all the boundaries. In this garden to be laid out, the owner desires fruit trees; and it is convenient and good policy to plant them in a line with the boundaries—reserving, perhaps, the front line for ornamental trees. For convenience in getting at these fruit trees, it would be well to run a walk in a line with them. Then, again, fruit trees are wanted in the central portion of the garden, and they should be so set as to admit of the plow—which cannot be unless set in a line, with walks to reach them at right angles. Having done this, a few subordinate alleys, with graceful curves, can be struck out, with mounds and fancy-shaped flower-beds here and there, to break the stiffness of straight lines introduced for convenience. These embellishments readily suggest themselves where the lot is uneven, or where the out-buildings break in upon the geometrical arrangements.

The more uneven and undulating a lot, the better; as natural inequalities can be made greatly to subserve the purpose of ornament, though difficult to work up. A lot, also, in which the least number of sides are seen at once, is preferable for the same purpose, as its dimensions will not be readily perceived, and as its broken surface may be dressed up in a style entirely original. One acre lots are rare, however, in which they cannot all, or nearly all, be seen at once; shrubbery, in such cases, should be made to hide them. My own garden, in this respect, is entirely out of rule, as at no one corner can you see another, and in no position can you see but two.

Although straightness in the order of trees and avenues in a garden, should not, in my opinion, be entirely discarded, as they seem to be in a diagram in the monthly *Farmer* (vol. VI., p. 209,) as also in the *Annual Register* for 1855, I am far from advocating that painful and rigid exactness of arrangement, in correspondences in trees, flower-beds, mounds, &c., as has formerly obtained in landscape gardening. Laying the ornamental portion of a garden out in parallelograms, balancing everything with studied exactness—making one half reflect the other—appears formal, stiff and unnatural, and instead of dressing nature up with blending art, is greatly at war with her.

Macaulay, the historian, in a criticism upon the "correct" school of Poetry, gives an illustration which is humorously in point as relates to the correct or exact style of landscape. "The correctness," says he, "which the last century prized so much, resembled the correctness of those pictures of the garden of Eden, which we see in old Bibles—an exact square, enclosed by the rivers Pison, Gihon, Hiddekel, and Euphrates, each with a convenient bridge in the centre—rectangular beds of flowers—a long canal neatly bricked and railed in—the tree of knowledge, clipped like one of the limes behind the Tuilleries, standing in the centre of the grand alley—the snake twined around it—the man on the right hand, the woman on the left, and the beasts drawn up in exact circle round them In one sense the picture is correct enough; that is to say, the squares are correct; the circles are correct; the man and woman are in a most correct line with the tree; and the snake forms a most correct spiral."

The modern idea is, that ornamental trees or shrubbery planted for effect, should be so irregularly placed, or grouped together, as to impress the belief that they were planted by nature, and only dressed up or circumvented by art. As a general rule, on a broad lawn it seems correct. Yet I think many of its advocates go too far, and sacrifice too much to their unerring goddess, Nature—as they fancy her—when they deny the propriety of ever "matching trees," or planting in pairs. Correct taste, under certain circumstances, seems to require it. If an individual at the entrance of his carriage avenue from the street, should plant two elms of equal size, one on each side, and should place them in line with the highway, what should we think of one of the "naturalists," who, stopping to criticise the work, should exclaim—"Too much art—no nature—stiff and awkward!" And what should we think if the proprietor had planted one large elm and one small one, or an elm and an ailanthus, so that they need not reflect each other? Should we not think it nearly as absurd as if one gate-post were larger than the other, and of a different color? And so in an avenue leading to the dwelling; would not the trees appear finer planted uniformly, of equal size, alike on each side, or matched in pairs opposite, rather than all mixed up in defiance of law or symmetry? Science that would answer negatively must have run mad, and would beautify a man by giving him a wooden leg instead of his sound one.

Truth generally falls between extremes, no less in landscape gardening than in all the other affairs of life. Hence eclecticism should be encouraged. Straight lines and right angles, it is true, are unnatural; but they certainly are not in all places disagreeable. Acute points and right angles, judiciously interspersed with curves, circles, ovals, and irregular diagrams, produce by their variety a happy effect. No decision, however, has ever been had—and never will be—of what perfect landscape gardening is. It is a matter of taste, which even gradually changes in the same mind; and although cultivated tastes may approximate each other in their preferences, one would uproot a few trees and

relay a few avenues which the other had set or constructed. Two critics of practised eye might admit the landscape fine, but differ as to how or whether it could be made finer. In passing judgment upon the propriety and harmony of the view, so many considerations are to be weighed—the position and size of the lot; its surface; the surrounding objects, such as dwellings, forests, &c.—that it would be a matter of surprise if two connoisseurs could perfectly agree upon the beauty of the aspect, where much art had been displayed—though they would readily condemn where no attempt for effect had been made. D. W. L.

West Medford, 1857.

LEGISLATIVE AGRICULTURAL MEETING.

[Reported for the Farmer by H. E. Rockwell.]

The *Sixth* of the series of Legislative Agricultural meetings was held Tuesday evening, as usual. The general topic for discussion was "Manures and their Application."

Hon. C. A. Phelps, Speaker of the House of Representatives, was called to preside. He expressed himself highly honored by the privilege of being present to preside at the meeting, but he frankly confessed that, practically, the subject of agriculture was not one with which he was acquainted. The subject of manures was one of the utmost importance and interest to agriculturists. That subtile chemistry by which nature, from objects the most offensive and most disgusting, produces grains of the sweetest kind, fruits the most luscious, and flowers of the most splendid hues, was certainly one of the most mysterious and wonderful operations of nature. He had hoped that agriculturists would treat fruits in the way that gentlemen of the medical profession sometimes treat the human system. When they find the presence of an alkali in the human body to too great an extent, they apply an acid as a remedial agent; and *vice versa*. It may be a question whether this principle might not be applied in the cultivation of fruits, and they be thereby improved. He had himself tried the application of strong alkaline suds to a bearing grape vine, and he fancied that the acidity of the fruit was thereby lessened. He had thought that strawberries, and similar fruits, might, in the same way, be benefited. The manner in which the chemistry of nature elaborated fruits or grain from the manures applied, was exceedingly interesting. As an instance of the misapplication of humanity, he referred to a visit to the field of Waterloo, from which for many years the largest crops of wheat were obtained, and some even declared that the covering of the grain was of an unusually red color. Massachusetts, he hoped, would never have any field of hers thus enriched.

Hon. R. S. Fay, of Lynn, said that he would commence the debate, though he was not so much skilled in the subject as others. He knew of no subject of more importance, especially to the farmers of Massachusetts. We sometimes speak of the way in which the soil of Virginia has been reduced. But perhaps no State had reduced its land more than Massachusetts. Farming lands are not so valuable in this State now as they were fifty years ago. We all ought to know that there must be a portion of organic matter added to every soil to make it fertile. It is easy to have soil analyzed, and to make the additions that are necessary. If a field is found deficient in lime, or some ingredient which is necessary for the production of wheat, then that particular manure should be added. Ground bone for turnips, to the amount of sixteen bushels to the acre, will be sufficient to insure a good crop—more would not increase it—on ordinary soils. So the same principle may be applied in the cultivation of corn, potatoes, or any other crop. But barn-yard manure seems to be well adapted for all crops. To supply our ordinary soils, he had found it necessary to use twelve cords to the acre—that is only a fair amount. But probably not two cords are used upon an average, in the State of Massachusetts. He related an incident connected with his travels in Scotland, where he saw a farm of six hundred acres; and he found that the whole success of the farmer depended on his putting as much manure upon the land as would purchase an ordinary farm. He spent $1500 for manure and $600 a year for bone dust, in addition to the manure made upon the place from 700 head of cattle. He raised twenty tons of turnips to the acre, beside the tops; he raised thirty-two bushels of wheat to the acre; and he had only three acres of grass, permanently. All the rest of the farm was cultivated. He paid between six and seven thousand dollars a year for rent. Such is the necessity for economy of manure now; it is important that liquid manure should be saved and applied in a liquid state, to such crops as can receive it. We raise from one-fourth to one-half less than we should, if we saved and properly applied all liquid manures. He would apply unfermented manure to the land in the fall and plow it under. The soil will absorb and appropriate it, even if a crop is not put upon the land for two years. As fertilizers of a farm, he spoke highly of sheep; and independent of that, they are as profitable an animal as farmers can keep. A German writer has said that the droppings of a thousand sheep for twenty-four hours, will manure an acre of land as highly as it can well be made. In that proportion, any farmer can fold his stock of sheep, and thus enrich one portion of his farm at a time, as he chooses.

Mr. Hyde, of Newton, spoke of the manures with which he had experimented. He had tried guano with high expectations, but he had not the confidence that he once had in it. He applied it on grass land at the rate of 300 lbs. to the acre, put-

ting it on in strips, leaving alternate portions with none. The results were very good, causing a great increase of the crop. He had since tried fish guano on grass, and had seen no good results. He marked off a piece of ground on the meadow, and sowed it in strips during a rain, and he could see no difference. He tried super-phosphate of lime with like poor results. He applied horse manure, guano, fish guano and super-phosphate of lime to rows of peas. He found the horse manure equal to the guano. The fish guano failed entirely. He tried a similar experiment with rows of corn, and could not see that he found any benefit from fish guano and the super-phosphate of lime. He cultivated also seventy varieties of potatoes, and tried these four manures on them with similar results. The value of salt lye and ashes were also spoken of. The former should never be used near the roots of trees, but it did well on grass.

Mr. BACHELLER, of Sutton, had tried guano two years to a limited extent. As he had it applied, directly in the hill, with a little loam between it and the corn, the corn was destroyed by it. Mixed with compost he had found it to do very well. Upon grass it did not produce so good an effect as he had anticipated. He had tried De Burg's super-phosphate of lime on corn with good results. His neighbors also had found it very good. He had found plaster on his pastures very useful indeed; it brings in the white clover, and makes the feed thick and green. Upon potatoes he had found no benefit from the use of plaster. He usually applied fifty loads of manure, and obtained from forty to fifty bushels of corn to the acre.

Mr. HYDE again spoke of guano, and said that he was not a strong advocate for it. At the price at which it would be likely to sell this spring, he did not think it would be profitable to use it. He did not consider it a fertilizer, but only a stimulant, and only fit to be used where other manures were also used, in order to aid in extracting from them their virtues to the greatest extent.

Mr. FITCH, of Sheffield, spoke of the proper application of manure. Where the soil is light—he thought the manure should be plowed in rather deep; but where it is heavy, it is better to apply it upon the surface, or in the hill. He would plow in eight inches, rather than ten, where land is porous. He had had no experience with guano. Plaster he had used considerably; but he would not use it continually. In his section, he considered it one of the best manures in combination with other manures. To corroborate the remarks that had been made as to the importance of manuring highly, he related the results in the case of a gentleman who purchased a small farm near New York, running in debt for it, and then putting on $40 worth of manure to the acre. Every fifteen years he had expended the same sum for manure. Corn and hay had been the chief products of the farm, and the owner after having spent thirty years upon it, and rode on his hay to market enough to ride 70,000 miles, was now worth $80,000 as the result of his farming. The success of all farmers in Massachusetts must depend on their making their farms better. All the profit will depend on making the lands as rich as they will admit of being made, because it costs no more to cultivate an acre for a large crop than for a small one.

Mr. STEBBINS, of Chicopee, also concurred in the opinion that the great secret of the farmer's success was in making, saving, and applying manure. He believed every farmer of his acquaintance wasted manure enough every year to manure an acre sufficiently well to make it produce fifty bushels of corn. He applied about twenty-five cart-loads—some six or eight cords—to the acre, besides some 150 or 200 lbs. of plaster sowed on, and all plowed in together. He used the double Michigan plow, which he considered the best now in use, and he always plowed ten inches deep where he could do it. Mr. S. related the results of his practice in manuring thoroughly, and said that for twenty-five years he was in the habit of taking from 75 to 100 bushels of corn from an acre. He concurred in the opinion of Mr. FAY, that sheep are as profitable stock as the farmer can keep, for the purpose of enriching a farm with manure. Their manure is worth from 30 to 50 per cent. more than that of common stock. Hogs, he thought, would pay a farmer for their keeping, if well supplied with earth and vegetables through the summer season. He usually kept from twelve to fifteen, and made from them a hundred loads of manure, which was worth in the country $125. He had used guano for three seasons, and he thought it an excellent manure; but farmers generally did not apply it as he had done. He plowed it under very deep, and put on as much as 500 lbs. to the acre. In that way he obtained from land which produced in 1853, without guano, about 30 bushels of corn to the acre, and 25 bushels of oats in 1854, at least 50 bushels of corn in 1855, with guano. Last spring the same land was sowed to wheat and oats and produced 20 bushels of wheat and 40 bushels of oats to the acre —having had a dressing of 150 lbs. of guano to the acre before plowing. Mr. Stebbins concluded by repeating his opinion that farmers greatly mistook their calling when they did not plow deep and manure their land thoroughly. He believed that a hundred per cent. more might be produced from the farms of Massachusetts than is now produced.

Mr. WETHERELL spoke of the art of manuring as being the art of feeding plants, and worthy of the same attention as the art of feeding animals. The nature of plants and soils needs to be studied, and when understood, together with the nature of specific manures, it is as easy to feed plants and

make them thrive as to fatten an ox or a horse. Homœopathic doses of guano he considered very unprofitable. It is for the want of understanding the nature of the soil that so many errors are committed in the application of manures, and so many opinions expressed in regard to their value. If every farmer who makes a statement would tell what the soil is on which his manure was put, then another man could judge what would be the result of a similar application upon his farm. Mr. W. suggested to the committee the propriety of fixing a rule limiting speakers to ten minutes each. He thought there should be an opportunity for more of the farmers present to give their views.

Dr. REYNOLDS, of Concord, said that the great demand of the age upon farmers, is, that the soil shall produce greater crops. The way to make soil better is to raise good crops. The man who raises a large crop will permanently improve the land. The very fact of the increase of our population should be the means of increasing the richness of our soil; the wash of the house, the suds and the proper use of night-soil with muck and other substances for compost, will furnish much valuable manure. A town of five hundred families, supposing each one to save $10 worth of manure more than they now do, will save for itself $5000. If this is applied to the State, it is easy to see the value to the State. He did not think the soil of Massachusetts was depreciating. The great object of the farmer should be to get manure, and then to apply it properly. The lateness of the hour cut short the remarks of Dr. REYNOLDS. He thought the subject needed further discussion.

The President then announced the subject for discussion at the next meeting to be—"*Fruits and fruit trees—Forest and shade trees.*" Adjourned.

For the New England Farmer.

DUTY ON WOOL.

JOEL NOURSE, ESQ.:—*Dear Sir*—As it is a time when the manufacturers of wool are making great exertions to get the duties off from wool, a great deal is said in favor, and nothing against it. I have taken the liberty to send you an article on wool from H. C. Merriam, in the September number of the *Albany Cultivator*, for 1850, and a copy of the *Vermont Journal*. I want you should read the letter taken from the New York *Times*, if you have not already, and see if you think it is the true policy to protect the manufacturer and not the wool-grower. I understand the policy to be to raise the duties on foreign broadcloths, and take all the duties off from wool, so the manufacturer can go to the wool-grower and say,—here, you are our servants; we feed and clothe you, and you tend sheep for us; we will give you so much for your wool, and if you will not take it, we will buy foreign wool, even if we have to pay more than what we can buy your wool for; or, in other words, we will pay you twenty-five cents a pound, or we will pay two shillings for foreign wool.

I suppose it will not make much difference with Massachusetts farmers, whether the tariff is taken off from wool or not; but it makes great difference with the Vermont farmers. A wool buyer last summer said they would have the duties off from wool next winter, and, said he, if they do, it will ruin your New England farmers, they can raise wool so much cheaper at the West and South than we can. H. S.

East Thetford, Vt., 1857.

For the New England Farmer.

CHINESE SUGAR CANE.

DIOSCOREA BATATAS.

MR. EDITOR:—As every thing relating to the cultivation and value of new vegetables introduced into our agriculture is interesting to me, I doubt not it is to most of the readers of the *Farmer*. I will give you a little of my experience in the cultivation of some of them the last season.

I received through the U. S. Patent Office some seed of the Chinese Sugar Cane, and having but little confidence as to its value, neglected to plant it until the last of May, (except a few hills in the garden, which was put in early, and seed fully matured.) The crop grew finely, attained a height of from 10 to 12 feet, seed formed, but little of it matured before the hard frosts. Upon examination found the juice very sweet, and concluded to try and see what I could do with it. In the first place, I cut up some and undertook to pound it out in a large iron pot, but abandoned that as a slow and tedious process. Having a small cider press, I concluded to cut it up and subject it to the screw, there being some three or four bushels of it, in pieces from two to four inches long, in that way obtaining but a small proportion of the juice of course, but enough to make two quarts or more of beautiful looking syrup; this possessed a slight acid taste, which I attributed to the press having been previously used for cider, and the juice standing over night before boiling. I am so confident of its value, that I intend planting a piece next season, and prepare some hard wood rollers, which I think may be made to crush the cane, and enable me to get juice enough for more extended and accurate experiment. The present high prices of sugar and molasses will be a powerful stimulant towards proving its value. As regards profit, compared with the corn crop, I find, in looking over the different accounts of experiments, Mr. Richard Peters, of Georgia, gives the following, viz: ¼ acre, 3315 canes, produced 58½ gallons thick syrup; rate per acre 468 gallons.

468 gallons, 50 cents per gallon	$234,00
Cost of making, in Georgia, 15 cts. per gal	70,40
Giving per acre	$163,60

Now deduct the same amount per acre for manure, labor, &c., and the profit will overrun that of the best acre of corn, at the low estimate of 50 cents per gallon, which is 17 cents below the present retail price of good molasses.

I see in your last number, some notices of the *Dioscorea Batatas*. A friend presented me with six tubers last spring, which he had in a hot-bed some weeks, but for all that they were a long time in getting up, grew slow and puny through the season, although I called the ground good, and well prepared. I cut some of the vines into sections to

produce seed for another year's planting, got some 40 or 50, by planting these sections, the size of a pea, some larger. I dug four of them after the frost had killed the vines, leaving two to stand through the winter, found the tubers from 14 to 24 inches long, and about one inch through at the bottom. I have but little faith in their succeeding in our climate; they may do further south, but will not condemn them entirely, until after another year's trial. I also raised about four quarts of the *Jopan Pea*, planted them early, did not fully ripen, pulled up the stalks before the hard frosts, and stacked and cured them in that way; they are very fine for the table, but not to be depended upon as a crop in our latitude; and I doubt, provided they could, whether they would be profitable. JAS. H. FERRE.

Agawam, Hampden Co., Mass., 1857.

For the New England Farmer.

THE SNOW-BIRD FAMILY.

BY LEANDER WETHERELL.

A PLEASANT MOCKERY.—While the sun was shining brightly on Sabbath forenoon, our ears were saluted with the joyous sound of bird-music, and on looking from the window into the yard we saw great numbers of summer birds busily regaling themselves from the seeds on the weeds that were suffered to mature there, and filling the air with their glad melody—very grateful indeed to our feelings, but O, how tantalizing, since the illusion was so soon to vanish by a relapse again into a zero temperature! The birds represented, were the *various species of swallow so common here all summer, the thrush, wood-robin and some others*, which frequently do not migrate on the approach of winter, but retire to the swamps and forest depths for a home and shelter. The storm of the preceding night probably had disturbed their domestic arrangements in their asylum, and driven them to the abode of man for food. Would it not be well if housekeepers would more frequently throw the crumbs of the table about the doors and windows, to attract these little serenaders that sometimes in this way visit our dwellings, and contribute not a little to while away the weary hours of winter.—*Amherst Express, Jan.* 16.

Some one several weeks ago, inquired through the *New England Farmer* concerning the white-bellied swallow, and the snow-birds. The question concerning the former species was subsequently answered in the fourth number on the Swallow Family. That relative to the snow-birds will now be considered, as these little visitors from the north are seen in flocks by the roadside, about tilled fields and farm-houses.

The common snow-bird, (*Fringilla Huelsonia,*) is well known, whose migrations, says Wilson, extend from the Arctic circle to the Gulf of Mexico, spreading over the continent, from the Atlantic to the Pacific. They usually make their first appearance as winter approaches, on the borders of woods, in flocks of forty or fifty, more or less. As the weather grows colder, they advance nearer the dwellings of man, in search of food. When the ground is deeply covered with snow, the pressing demands for food cause them to approach even unto gardens and barn-yards, where they glean, appearing very familiar and lively, seeming partially domesticated. By observers, their increased activity, and assembling into large flocks, is regarded as a sure prognostic of a storm. They are observed everywhere over the States, during the winter, and must, therefore, be an exceedingly numerous species. They leave for their northern homes in April, where they breed, far north of Hudson's Bay, where they are seen on their migration about the first of June. They are said to breed in the Alleghany mountains. They build their nests on the ground like the sparrow family, which they resemble.

In some parts of New England, says Wilson, "I found the opinion general, that the snow-bird is transformed in summer into the small chipping sparrow, (or chipping-bird,) so common in that season. This is a mistake." This will account for the mistake of a contemporary, whose pleasant local paragraph is placed at the head of this communication. The birds which were then observed, and whose notes were so acceptable, were probably the common snow-bird, for the other species enumerated migrate to the south to spend the winter, returning very late in spring—about planting time—with the exception of the sparrow, and leaving while it is yet summer. The "wood robin" mentioned is the wood thrush, an exceedingly shy bird in its habits, and one of the sweetest singers of the bird tribe. It is called the American nightingale. Audubon says, "This bird is my greatest favorite. To it I owe much." It is not very probable that this bird, which does not make its appearance in the spring for weeks after the swallow's advent, was seen at Amherst in January.

The color of the common snow-bird is a bluish black upon the back, abdomen and lateral tail-feathers white. Length, six inches. Bill, short and stout. The snow birds, observers say, migrate in the night. It was noticed by Dr. Richardson as far north as 57 degrees; and has been seen as far south as 30. It is common in Northern Europe. Its note is a sharp chip; hence it is often called the chipping-bird; sometimes the blue chipping-bird.

The Lapland snow-bird, called also the snow-bunting, (*Fringilla lapponica,*) is another species of the snow-bird family. It is far from being common, being seldom seen, unless the winter be one of unusal severity; then it leaves its Arctic home for more southern climes. In the winter of 1836, numbers were shot on Long Island. Audubon observed them in Kentucky and Missouri. They feed on seeds and berries. They build their nests on the ground. Their color varies with the changes of the season. They are sometimes seen in company with the first described species. This bird is about seven inches in length; and has been observed as far north as the 74th degree of latitude.

The white snow-bird, (*Emberiza nivalis,*) though not very common, is not deemed a rare bird in this State, during the winter. The farmer frequently notices these birds, as he does the common snow-bird, approaching quite near his barn and house, coming into the garden and barn-yard, in quest of food. They, like the preceding species, are lively, joyous and happy. These birds, that thus frequent the abodes of men during the inclement season, seem well fitted to awaken feelings of pleasure in the minds of observers. Even the cawing of the crow, and the screaming and scolding of the garrulous blue-jay, serve, at this season of the year, to arouse the latent feelings of pleasure in the minds of such as love nature's sounds and melodies.

"All discord is but harmony unknown,"

only to him who has no ear for music; for what is music, but sounds agreeable to the ear that is attuned by the soul's being in love with nature's voices, whether coming from her animate or inanimate creations. The heralded dislikes of some persons, serve to betray their lack of liberal culture. The infinite wisdom, goodness, mercy and

beneficence of God are nowhere more manifest than in the numberless objects in both the vegetable and animal kingdoms, made to adorn, beautify and furnish this world, created for man's dwelling-place. The endless variety and incomparable beauty of the flowers that embellish the hill-side and the valley, the woods and the mountain, seem enough to awaken feelings in every mind, of unutterable joy, gratitude and delight. Then to all this add the innumerable number of insects, birds and reptiles, whose shrillings, songs and peepings are heard severally in their seasons, and how much does the earth, even now, fall short of being a paradise to him who enjoys all these things, with their infinite and untold accompaniments? Alas, alas, that so few seem to find pleasure and delight amid this display of objects beautiful to the eye, so admirably fitted to minister to the highest earthly joy and felicity, and that so many should seek their happiness in the base indulgence of carnal appetites and passions. But to return from this seeming digression.

The white snow-bird has been seen as far south as Maryland and Kentucky. It has been known to breed in this State and Maine, but generally migrates to the north for this purpose. It builds its nest on the ground. It subsists on grass-seeds, insects, and very small shells. In length it is about seven inches. In some parts of the country it is simply called white-bird.

The chickadee or black-cap titmouse (*Parus atricapillus,*) is by some called a snow-bird, because frequently seen in the depth of winter. It is an inhabitant of the northern regions, and has been seen as far north as the 65th degree. Audubon noticed it in Maryland. It has also been observed in Kentucky, and as far south, says Zadock Thompson, as the Gulf of Mexico. It is so common that it needs no description here. They frequent orchards, late in the fall, and seem like the woodpecker, in pursuit of the eggs and larvæ of insects. The habits of this little bird resemble those of the woodpecker family. It makes its nest in the hole of a tree, and raises usually two broods a year.

These species now described embrace the more common snow-birds. They have all doubtless been often observed by the readers of the *Farmer* this present winter, and will continue to be occasionally seen until April, when they will migrate northward to spend the summer and breed.

For the New England Farmer.

THE SKELETON OF BLACK HAWK.

Mr. Editor:—I am here, *en route* for your city, with the remains of the once celebrated horse, "Black Hawk." It may be interesting to your readers, especially that portion of them who feel the least interest in the science of veterinary medicine, to know that David Hill, Esq., has donated the above to our infant institution, the "Boston Veterinary College;" and so soon as I shall have prepared the bones and articulated them, the public shall have an opportunity of viewing the osseous fabric of a horse, whose like the world has never seen. I have spent the past week at Mr. D. Hill's hospitable mansion, engaged in divesting the bones of their fleshy and tendinous tissues, and I am under great obligations to that gentleman, and his son Charles, for valuable assistance rendered on the occasion.

I just give you this brief item of news to satisfy those who feel an interest in the matter, that the remains of "Black Hawk" are in safe keeping, and that instead of being left to decompose and resolve into their original constituents in mother earth, they shall now serve as a typification of the American trotting horse, and also afford the professors of our college an opportunity to demonstrate the peculiar anatomical differences that exist between his frame and that of other breeds.

I consider Mr. Hill's donation one of great value to our college, and one that will be looked upon in years to come, as a rare and inestimable relic.

Yours, with respect, G. H. Dadd, V. S.

Rutland, Vt., Feb. 18, 1857.

For the New England Farmer.

WILD FLOWERS.

Mr. Editor:—I have had considerable experience in raising and trying experiments on different plants and shrubberry, and will tell you what I did with some wild flowers. Being defeated one winter in keeping alive some valuable plants, the coming spring I determined to bestow my labor upon something of less value. Accordingly, when spring came, I emptied all the dirt out of the pots and boxes, and replenished them with a light, rich soil from a hog-yard.

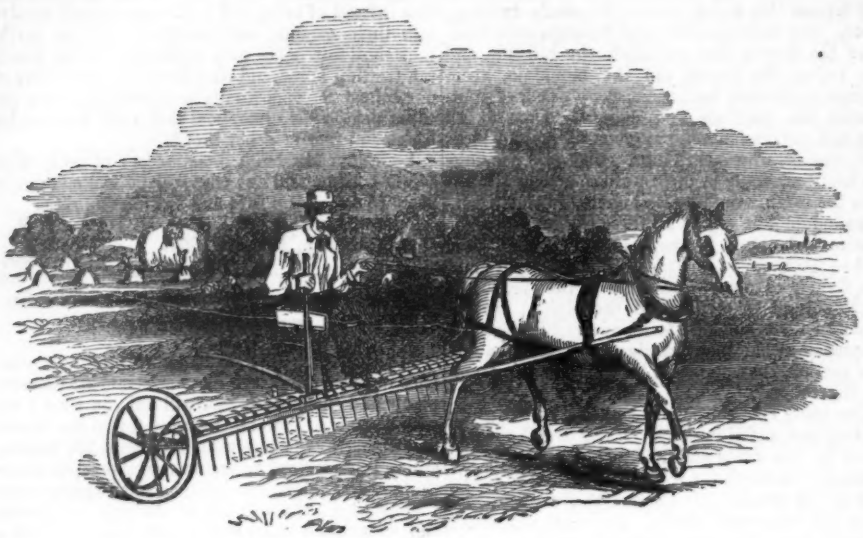
When wild plants made their appearance, I transplanted a root of the common dandelion; in another pot a catnip root; in another, a buttercup; in another a violet root; and furnished them all with the same kind of soil. But the parsley plant was the most beautiful of all, and grew most luxuriously. All were watered well with pure water; suds is hurtful to most kinds of house plants. But I soon perceived that the violet began to droop, and thought it best to throw it away, but looking over the pages of an old book treating of flowers of every description, I went into the woods and procured a quantity of light "earth scraping," and a rock moss, and gave a fresh filling to the pot which contained the blue violet, and had the satisfaction of seeing in a short time the most splendid leaves and blue flowers I ever saw. As for rapid growth and richness, the parsley exceeded every other plant.

The violets and buttercups blossomed double, and much larger than in a wild state. The flowers of the catnip were of a pure white, the leaves had the appearance of deep green velvet. The parsley ran over the box, the blossoms much larger than usual, and some of the vines were over a yard in length. The box was hung up some distance from the floor.

The above plants were much admired by visitors. The exclamation was frequently heard, "O, how beautiful! what rich looking geraniums they are," and when informed what they were, they were surprised as well as pleased. Could not the above be truly applied to the uncultivated *mind?* How often we see the most beautiful expansion of intellect beaming forth with almost an unearthly brilliancy from individuals; those whom, like the wild plant in the back yard, were once, perhaps, through stern misfortune and cruel neglect, as uncultivated.

Worcester, 1857. Mrs. E. B. R——s.

☞ Lemon juice is principally relied on by the physicians in London for curing rheumatism. Three table-spoonfuls per day is a dose for a man.



CARPENTER'S IMPROVED PATENT HORSE RAKE.

This rake, invented by Charles P. Carpenter, of St. Johnsbury, Vermont, and patented by him Aug. 26th, 1856, possesses certain merits, in respect of which, it is claimed to be superior to any and every other rake yet offered to the public.

These merits are principally two. 1st, It is the only rake that can be tended by the person who rides on the rake, seated at his ease. On the front of the bed-piece is a convenient seat for the raker, who, by means of a lever, near at hand, releases the hay that has been gathered, by a very slight motion of the lever, and without changing his position. A boy twelve or fifteen years old, can perform the labor with this rake, as well as a man. It is thus the most convenient and labor-saving rake for the farmer that has ever been devised.

2d. It is a double rake, equally well adapted to smooth and rough ground. On smooth ground the rake is used on wheels, the driver riding; for raking on rough ground it is used without wheels, the driver walking behind it, as with ordinary rakes, and releasing the hay by means of the same lever as before, which is inserted in another position in the moveable head. In neither case is the driver required to use any more strength than to remove the lever from a catch that confines it, and the rake then frees itself from the hay. When used on rough ground, the springs beneath the bed-piece enable the driver to adapt it with ease to the inequalities of the surface. By referring to the engraving and description above, it will be seen that the simplicity of the rake is an indication of its worth and usefulness—nothing can be more simple; and yet its adaptation to the wants of the farmer is before any other rake ever presented to the wants of the public.

This rake has received the highest commendations from scientific and practical men. It was exhibited at the State Fairs of Vermont and New York, in 1856, and received the warm approval of the societies, and favorable mention of the press.

There, that is what the proprietors of the patent say of their rake. We have often seen and conversed with them, and believe them to be honorable men; but cannot say, positively, that their statements are correct, because we have had *no actual trial of it*, and this must be the true test of all farm-implements and machinery. We have, however, given the rake a critical examination, and are willing now, to say, that it appears to possess some merits over any other rake we have used. We certainly think favorably of it, and when we have fairly tested it, holding "the ribbons" and the lever ourself, shall be ready to speak of it again. Those who wish may learn more about it by inquiring of the manufacturers, *Nourse, Mason & Co.*, Quincy Hall, Boston.

BERKSHIRE COUNTY AGRICULTURAL SOCIETY.—Officers for the ensuing year:—President, E. Williams, Esq., of Richmond; Vice Presidents Henry Dresser, of Stockbridge, C. K. Tracy, of Hinsdale; Secretary, E. H. Kellogg, Esq.; Treasurer, Dr. S. Reed.

HILLSBOROUGH AGRICULTURAL SOCIETY.—Our friends had a capital time at their annual meeting at Milford, on the eleventh of February. We wish we had room for a report of their discussion on breeds of cattle.

For the New England Farmer.

ABOUT PUMPS.

Neighbor Goodman was in, a few evenings ago, and gave me a little of his pump experience. Goodman has some eight or ten pumps to look after, and says "it's a study to keep 'em all a-going; something or other is everlastingly getting into his pumps," he says, but he feels now a little on the gain about them, and hopes if all are careful as they should be, that they may hold a spell. One or two got frozen up the other day. Goodman said he didn't stop to try putting in a handful of salt to thaw through three feet of ice, as is so often recommended, nor a spoonful or two of molasses, as a late *Farmer* has it. No, indeed! Goodman keeps the salt for the pork, and the sweetening for the pudding. His way to thaw out a pump is, to take a piece of lead pipe and tunnel, and plenty of boiling water. By means of the pipe a stream of hot water can be passed directly upon the ice, and it will thaw all away in a few minutes. My neighbor has all his wooden pumps furnished with small wooden faucets just under the platform; an inch hole and a plug just over each one, admits a cheap rod wrench, which adjusts the stream to run off as desired.

One thing my neighbor told me that I thought a capital idea. He says he has often found his match to get up the lower box of a copper pump, and has been obliged to saw the pipe in two below the pump, to drive it out. Then after the box was fixed, there was all the bother of soldering it together again. He has bought brass couplings—the same form as used on engine hose—and soldered one part to the lead pipe, and the other to the pump. When anything is the matter with the pump, the coupling can be unscrewed in a minute, and the pump taken away to be conveniently repaired. These brass couplings are found at the plumbers in Boston. The cost is one dollar for an inch and quarter size.

My ingenious neighbor does his own soldering. It might be better, if one lived near a brazier in a town, to patronize him; but it is a great convenience to be able to repair or solder together a pipe, oftentimes; and this art, as well as many others, very well to know about, is not a great mystery.

You must have a good copper soldering "iron." This will cost in Boston according to weight, from 25 to 75 cents. The heavier the "iron," the longer it will retain heat. A shilling's worth of solder from the tinman will last a good while; a little pounded rosin, a jackknife, and fine saw, are necessary. It is best to heat the iron with charcoal in a portable furnace; Goodman uses an old iron kettle, with a hole through the bottom, which allows the necessary circulation of air. Now the operation seems to be just this; one part of the pipe—the lower part—is flared out around the edge, and whittled and scraped *perfectly bright and new*; the other part of the pipe must be made equally clean. The smaller end is now placed in the other, and if the work has been rightly done so far, there is a channel above and outside of the line where the two parts meet for the solder; the two parts are now to be held perfectly still; a little rosin is thrown into the channel; the use of this is to make the melted solder "flow," that is, spread willingly on the parts to be connected. The iron should not be red hot; that injures it, and burns off the tinnings with which it is tipped, but it should be hot enough to melt solder readily.

Now, it must be borne in mind as an important condition, that solder will not adhere to *cold* lead, so, while the solder is being melted into the channel, the pipe should be touched with the iron. If the pipe is kept hot, and every drop of solder melted in with the preceding one, so that no holes are left, the union is complete and satisfactory.

I suppose, Mr. Editor, a good many of your readers are "greatly exercised" with their troublesome pumps. It will happen sometimes, that small leaks exist which produce immense discomfort; below the lower box there may be the smallest possible hole where the air gets in and lets the water settle down; you catch hold to pump, and the handle flies back in your face, while the bottom of the pail is covered with a few aggravating bubbles.

Then it makes a man feel poor to take hold of the brake, and have it drop down against the log. But if the slightest thing gets under the lower clapper, this will happen. I think it pays to have an iron rod always on hand, fitted at the smith's in the best manner, to start the box right out, and find the difficulty at once. It may be a little gravel which can be easily removed. If the leather is at all old, or obstinate about shutting down tight, better throw it away and have a new one. The box should be dried before being put back, and the yarn or hemp packing very even and smooth, which is always to be kept full of hard, beef tallow. W. D. B.

Concord, Mass., Feb., 1857.

For the New England Farmer.

WINTERING BEES.

Mr. Editor:—I have read several articles in the *Farmer* relative to the management and wintering of bees. Some of them, in my opinion, contain many erroneous ideas; others very useful ones. If bees are well managed, they are one of the greatest sources of profit that the farmer has.

I am opposed to leaving bees out of doors in winter, as the extreme changes may weaken whole colonies. A bee-house is usually located in some warm place, fronting the south; as the sun shines on the hive, the bees are induced to leave it and fly about in the air, and as the air is cold, the bee falls on the snow in nine cases out of ten, never to rise; thus the colony becomes weak. I have picked up scores of bees from the snow and carried them into the house, and put them into a tumbler, and they would become as lively as ever. To avoid these sudden changes, bees should be put in some cool place, one that would freeze a little, and be dry and dark. If I could have a place to my mind, it would be a cellar over a dry piece of land, partly above ground, and well covered over to prevent extreme changes. I would rather have it freeze a little, and well ventilated. I would put the bees into the cellar as soon as cold weather comes, and let them remain until the weather is warm enough to have them go to work in the spring. Bees wintered in this way eat less honey, as the warmer you keep them the more honey they eat.

I have known several colonies to die that were put in warm places in winter. I place my bees in my house-cellar, and never have lost a colony in winter that was well supplied with good honey; my cellar is a very dry one, and the part where the bees are is cold.

In 1855, I carried my bees out of the cellar the 23d of April, five colonies. I sold one of them. The five produced fifteen colonies, or three each. The fall following I took up several colonies; put up ten for winter, and all wintered well. In the spring of 1856, sold eight colonies; the two that I kept produced five colonies; the two that I sold produced the same number; the others I have not heard from. When I carry my bees out in spring, I select a warm, sunny day, and if there are any snow-banks near the bee-house, I scatter straw over it, so that the bees can rise, if they get on to it.—Before carrying them out I scent the entrance to each hive with some strong-scented herb, each with a different kind, as sage, tansy, &c.; the bees lose their scent in the cellar, or all have a common scent, therefore are liable to mix and injure some colonies. The first hive I carry out the bees will most of them rush out of the hive; they will look as though they were trying to swarm, but in a few minutes they will all return to the hive, and then I place another hive upon the stand, and so continue, until my whole stock is placed upon the stand. If any colonies have too much honey, or more than is needed for winter and spring, I take the glass out, and remove a part of the honey. The bees will fill the space thus made in part with new comb, and fill with young bees. Colonies managed thus will swarm early. They must have sufficient space to breed young bees. I have had colonies that were so full of honey that they would not swarm; my bees swarm the most when they have just honey enough to carry them through the winter and spring. What little information I have of the management of bees, I have learned from your paper, conversation and observation.

N. W. HARDY.

Nelson, Cheshire Co., N. H., 1857.

For the New England Farmer.

HUBBARD SQUASH, &c.

MR. EDITOR:—As my name has been mentioned once or twice in the columns of the *Farmer* in connection with this new variety of the squash, and as "J. J. H. G." referred such as should desire seed of the "*Hubbard*" to me, as one who might be able to furnish them, I feel called upon to state for the benefit of those who have already, as well as those who may think of applying to me for seed, my experience in its cultivation.

Having heard something of the Hubbard, I obtained some seed, which I planted and nurtured with the greatest care—but without much *increase*. Instead, I think I must have fared very much as yourself and Mr. G. have done.

The seed came up well, grew finely, and suffered considerably from the different sorts of bugs which I suppose have made it their business to devour squash vines since the days of Adam. They passed through this ordeal, and came out of it well. The flowers began to appear, when a withering blight seemed to overtake them, and one by one they rapidly dried up and died.

The marrows, custards and common field pumpkins, in distinct and widely separated portions of my farm, suffered the same fate to such a degree that I shall barely have seed enough to plant again. The crookneck squash or bell pumpkin, as termed here, was the only variety that escaped, they doing finely, and under the same treatment as the others.

This blight I found to be a large grub, similar in size and shape to the common corn grub, but slightly different in color. This insect apparently eat his way into the stalk below the ground, and then up the stalk for two or three inches above the ground, when its presence could be detected by the incipient decay of the vine. In every instance where a vine began to show symptoms of death, I found one of these worms above the ground in the stalk. I never saw but one insect in the same stalk. Are these the same insects which "J. J. H. G." styles "the squash borer?" [Undoubtedly they are.—ED.]

If their attacks are continued, it will be impossible to raise anything like a crop of squashes where they exist. However, I shall try again on a large scale.

Of the Hubbard, I can only say that I am convinced from my own observation that they are as hardy and as easily cultivated as any variety. Of their eating qualities, I know they are the best variety I ever met with, keep late in the season, are exceedingly dry and sweet. Too much cannot be said of them, and any one who will fairly get them to be a popular institution in our country, will be considered a benefactor by all pie-loving people.

After thus far intruding upon your patience, allow me to say that I am much pleased with the *Farmer*, and hope never to be without it—that I, tyro at farming as I am, have gathered much useful information from its columns, and in its company have passed one year in the pursuits of the farm. Turning from a professional life, from the stern necessity that a partial loss of sight imposes, and taking up agriculture as a means to health, I have succeeded in making it somewhat profitable, and largely *pleasurable*. Old and experienced farmers need comparatively few directions in the art they have practised for a life-time, but young and inexperienced men, those who are compelled by health, or some other cause, to forsake other occupations for which they have trained themselves, and turn to the plow, for them correct instruction is of the utmost importance.

The spirit may, at some not far distant day, move me to jot down a few of the trials that encounter such a person, and give my experience in overcoming them. I can promise little elegance of diction or thought—if they prove useful, it will be enough.

JAMES L. GOULD.

Bridgport, Conn., Jan. 26, 1857.

REMARKS.—We shall be glad to hear from you further.

STATE ALMS HOUSE AT BRIDGEWATER.—Mr. L. L. GOODSPEED, the efficient Superintendent of this Institution, seems to understand the culture of bipeds as well as the management of human beings. He slaughtered a six year old ox, recently fatted on the farm there, which weighed as follows: hide, 135 pounds; tallow, 220; quarter 1550—total, 1905 pounds, weighed three days after being dressed! There is a large farm connected with the institution, and the State is fortunate in securing a person to manage the whole, who is not only energetic, but skilful in the administration of all its affairs.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Preparations for Inauguration — Crowded Hotels — "Spring Time o'year is Comin'"—Cows and Pastures—Southern Conveniences of Life—Appropriations for Agriculture.

Washington, D. C., Feb. 24, 1857.

MY DEAR BROWN:—Once more I am taking a brief glance at Washington and its affairs, which have for most men, just now, a peculiar interest. Great preparations are making for the inauguration of Mr. Buchanan, and the worshippers of the rising sun are assembling in such numbers, that beds at the hotels are said to be luxuries not to be asked for. They have a caricature about the streets, which represents a hotel office, and a stranger inquiring for a room and bed. "Rooms and beds," replies the landlord, "have been all engaged for a fortnight, but we have one excellent *bag* left on that hook, that you can have if you speak quick;" and the picture represents rows of sacks hanging on the walls, with a man in each, with his head looking out at the top. At one of the hotels, an alarming illness among a great proportion of the boarders, members of Congress and their families, has prevailed.

The Board of Health has published a statement that the cause has been ascertained and removed, and to pay for not gratifying the public curiosity by stating the cause, somebody, whether truly or not, doth not appear, has put the story into circulation, that, on examining the water tank which supplies drinking water for the house, sixty dead rats were found in it, which had been poisoned with arsenic! It has been doubted by some whether this can be the true solution, because, it is suggested, many who have been ill there, have not drunk water enough during the session to produce the effect which is apparent. The rat story may be an idle rumor, but is not without a moral. Rats poisoned with arsenic always rush to water if possible, and the practice of poisoning them in this way should not be adopted, without due consideration as to where the bones of the dead will be likely to be found. A rat alive and stirring is a far more agreeable companion than a deceased rat "behind the arras," where Hamlet sought such animals, or served up with soup from a cistern.

Spring has thus early brought out to view here her earliest flower, the crocus, the grass upon the lawns in the public grounds has become beautifully green, and farmers in Maryland, close by this city, have already commenced their plowing. To a New England man, it seems strange that, with these advantages of a short winter, of a long season to prepare and plant the ground, of a soil easy to cultivate, free from stones, and far more fertile than our own, farming should not be a profitable business, at present prices. Cows are turned loose into the streets, and range over hundreds of acres of unfenced lands, free of cost. No such thing is known as an enclosed pasture near the city, and fifty cows in a drove may any day be seen now, wandering about, anxiously looking on the earth to see if the grass is coming through, and exhibiting strong indications that they have very little dependence except upon Nature's supply, without man's intervention.

Milk, as a consequence of this thriftless style of doing things, is sold at eight and ten cents a quart. The city turns out bulls upon the common, and each cow has her calf when she thinks proper, so that it is, of course, an interesting subject of inquiry when a cow stops giving milk, whether she intends to commence again this season or next.

Let a Northern man think for a moment, of living in a house without any cellar, without a closet of any description, without an aqueduct, cistern or well on his premises, and no means of procuring water except from a pump in a well seventy feet deep in the street forty rods distant, and he will begin to realize some of the ideas of comfort which prevail about the greater part of this city. Prices of perishable articles of course must fluctuate with the weather. Potatoes in a mild day perhaps may be sold at one dollar a bushel, and in a week after, in a cold snap, will command double that sum, and merely because nobody can keep two weeks' supply, for want of a cellar. Congress, with its usual magnificence, has commenced an aqueduct, capable of supplying twenty such cities as this, and at some time, in this or a future generation, will furnish the inhabitants of the District with rivers of pure water. In the mean time, a darkie, with a pail of water on her head, is the "peculiar institution" to be relied on. Whether the people are waiting for Congress to provide cellars and other conveniences for their houses, is not known. There is undoubtedly a general disposition to be taken care of, rather than to take care of themselves, in all places where there is a great and wealthy power for any people to depend on. Self-reliance is the main spring of enterprise. A boy, or a society, whether religious or civil, that has a fortune to depend on at the start, seldom develops much energy. He who, like Wilkins Micawber, is always waiting for "something to turn up," generally waits till death overtakes him, while he who knows that nothing will "turn up" for him, unless he puts a crowbar under it and applies his own force, is pretty certain to see the bottom of things speedily.

I am glad to perceive here that the United States Agricultural Society has exerted a favorable influence on the public sentiment, or at least, on the sentiment of public men. The appropriations for agricultural purposes have not yet been made, and the Secretary of the Interior, whose office ends next week, did not recommend any appropriation for the ensuing year! Last year, the appropriation was $75,000, besides $15,000 specially for the impor-

tation of sugar cane cuttings, not of the new Chinese sugar cane, but of the old varieties for the exclusive benefit of the South, mainly of Louisiana and Texas.

A government vessel was sent out at public expense in addition to the $15,000 to procure the cuttings, and the papers now state, that most of the cuttings thus brought in are ruined in the passage. It is hoped this may prove untrue. I find no fault with what has been done, but when we at the North feel the want of any trifling aid from government to promote our agriculture, let us remember that so much has been done for another section, and not be too modest in our requests. A portion of the $75,000 was to be expended, as was generally understood, in procuring analyses of grain and the like, by Doctor Jackson of Boston; in procuring sets of models of apples, pears and other fruits, by Mr. Glover, to be distributed throughout the country; and for labor, by Mr. Lapham, in collecting and publishing information about the grasses. But the same Secretary—peace to his ashes—took the responsibility of vetoing the whole arrangement, as I understand, and so thwarted the design of Congress, and the wishes of the friends of Agriculture.

It should be understood that the agricultural appropriations are entrusted to the Patent Office, and that the Commissioner of Patents is subject to the control of the Secretary of the Interior, at least so the latter has contended, although the Commissioner makes his reports directly to Congress. Thus, although Judge Mason, the present Commissoner, is friendly to the interests of agriculture, and willing, in the most liberal spirit, to do all in his power, to promote the objects we all have at heart, and has able and efficient aid in his officers to manage his appropriate affairs, his movements have been embarrassed by this absurd accountability to another officer, who, so far as I can learn, has done nothing to aid, and much to hinder the progress of agricultural science.

Much was done the last year in obtaining and distributing seeds of new and old varieties, and in collecting and disseminating knowledge, especially through the Agricultural report. Our friend, D. Jay Browne, is one of the efficient powers in the Patent Office, and keeps the Agricultural Committee posted up about affairs. I think we shall get at least $75,000 appropriated at this session, which will enable the office to carry out its plans satisfactorily.

The time should, and must come soon, when we shall have a separate department of Agriculture, and a system of agricultural investigations worthy of the Republic. The fact is, that the farmers are too modest to ask for their rights. The eight large paintings in the rotunda cost eighty thousand dollars, and a single door in the Capitol will cost, it is said, two thousand, yet farmers are made to believe that it is a fearful extravagance to expend even a hundred thousand dollars to promote the greatest interest of the country, the interest of agriculture, which "pays for all."

Yours, &c. H. F. FRENCH.

For the New England Farmer.

IRON FOR PEACH TREES—COAL ASHES.

Our good agricultural papers, besides being very interesting as reading, are great sources of national improvement, the results of experience are, through them, so widely circulated. Some three or four years since I planted some trees here, and about that time I noticed the following from the *Ohio Farmer:* "A man may as well live without breath, as a peach tree without *iron*. If the ground does not naturally furnish it, the owner must, or be disappointed in the hope of fruit;" and in Cole's American Fruit Book, "From some experiments iron is a good manure for the pear, but a little is sufficient." I accordingly put a quantity of iron turnings around my peach and pear trees; but a few days since reading in *Loudon's Suburban Horticulturist*, I found, "When in consequence of saline substances, in the soil or applied to it, a salt of iron is produced, the iron becomes soluble in water, is taken up by the roots of plants, and is very injurious to them." My trees have not fruited much yet, but they grow rapidly, and look *healthy*, and I think the iron has benefited them. Here are good authorities disagreeing, and we want to know what *experience* teaches. At the risk of trespassing upon your time, I must tell you how near I came to losing a fine mountain ash tree. Walking with a neighbor past his house, he pointed to the tree growing beside his gate, and said he wanted the room for a fruit tree. I told him I would gladly take it out of his way, as I had room enough for some ornamental trees. I had it removed, and the *next* day, looking through the indices of the *Farmer* for instruction as to how I should dispose of my coal ashes, I found, "ash, mountain, for pear stocks." The next time I met my neighbor, I told him I should have lost my tree, if I had deferred transplanting it a day longer, that I should have felt bound to tell him I had discovered that by grafting his mountain ash with pear scions, he might in two or three years have had a fine crop of Bartlett pears. O.

Worcester Co., 1857.

OUR EXCHANGES.—We have an extended list of agricultural exchange papers, coming from every section of the Union, and there is not one among them but we carefully look over. They present many valuable facts and suggestions that we should be glad to copy did our limits permit. But, during the winter season especially, there are so many persons among our own readers who write, as well as read, and who are willing to give the results of their own experiments, that we find our columns mostly occupied by them. There are now before us articles from the *Working Farmer, The Homestead, Rural New-Yorker, Country Gentleman*, and

others, which we shall find room for when our present pressure is abated. An article in the *Working Farmer* on the education of farmers' boys, and laborers, ought to be perused by every farmer.

EXTRACTS AND REPLIES.

BUTTER MAKING.

I have been in the dairy business for about twenty years, and my wife as long; we have tried all the ways recommended to make butter, and nearly all kinds of churns. I take four agricultural papers, and never wrote a word for either of them. I think my experience worth as much as a man that never made a pound of butter. I have always sent my butter to the same market, and generally got good prices. About two years ago, a friend of mine sent me a circular, highly recommending Fyler's Butter-Working Churn, with particular directions for using it. It struck me as something new and useful. I ordered a number 4, of Henry Holmes, of Grafton, Vt., proprietor the two past years. I have worked my butter, and mixed the salt in this churn, and in no other way. I only work it once, as the direction says, and then take it from the churn, and pack in the tub. I can work 20 lbs. and salt it in less than ten minutes. My butter has never kept as well before, or given as good satisfaction. I am fully satisfied I have saved better enough to pay for six churns, and at least one-half the labor. I don't know Mr. Holmes, but I do know and appreciate his churn, and his principles in butter-making. I am informed the churn has taken 36 premiums in two years, and I am glad of it, for there are now many in my neighborhood, and highly approved; and as a farmer and nothing else, I feel it my duty, in this day of impositions, to speak out in favor of a good article, when I know it to be such. A WINDSOR CO. VT. FARMER.

Ludlow, Vt., Feb., 1857.

REMARKS.—That is a plain story, and comes from the heart, no doubt. We have never tried the churn, but have heard it highly spoken of. Next June we shall probably make butter from six or eight as good butter cows as can be found on the hoof anywhere, and we will make it in the Fyler churn, *if he will send us one.* If it proves well, we will say as much for it as you have; if not good, we will speak just as plainly. Isn't that fair, Mr. Vermont Farmer?

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HORSES—HOW TO BE USED.

MR. EDITOR:—I rejoice to see the same sentiment echoed from Maine, New Hampshire, New York, Rhode Island and Massachusetts, as to the inexpediency of testing the value of the horse by the speed of his movement. It seems to be admitted on all hands, that a mile in *four minutes* is amply sufficient for every ufeful purpose. If this conclusion is the result of the exhibitions that have recently been forced upon our view, it must be admitted that some good has come out of evil. As to *female equestrianism in public*, no one now pretends to advocate it. The wonder is that any female, having the least regard for decency, should have ever presumed thus to exhibit herself. I trust there will be no more such exhibitions.

February 23, 1857.

THE GARGET.

1. Do you consider a cow any more likely to have the garget on account of *once* having had it?

2. Would the fact that a cow had once had the garget, and apparently well recovered from it, depreciate the value of it in your estimation? and if so, what per cent.?

3. Is there any reliable preventive for this disease in cows, and if so, what is it, and when, and how should it be administered? F.

Lempster, N. H., Feb., 1857.

REMARKS.—1. Yes—if she had it badly.

2. Yes—10 per cent.

3. We have the evidence of several good farmers that *Aconite* administered, ten pellets at a time, and continued once in twelve hours for three or four days, will cure the garget.

It should be given the moment there are symptoms of the disease, in a little ball of meal, mixed up with water.

—

ONIONS.

In your paper of January 31st, I see an inquiry, by "a subscriber," wishing to know how to raise onions, and says he can raise "maggots and scullions." Now the method I have practised in my garden to make them bottom is this:—at about the time that some commence to bottom and others do not, I pass along the rows, and flatten, or break down the tops to the ground; thus preventing the juices from ascending into the stalks, which then must be retained in the bottom, and give them a greater growth. For the maggot preventive, I have tried salt brine and ashes, but not with so good results; although I have not been troubled much with them, late years. I think that to communicate with brother farmers on the results of our experiments, back and forth, is right, and if you think this will be any benefit to any one, you are free to publish it. A FARMER.

Vermont, 1857.

—

SWEDISH TURNIP SEED.

Thanks to Mrs. C. S. Morton, of Heath, for a small package of this seed. Will you come and take tea with us when we raise one large enough to dig out and set a table in? Mrs. C. says her husband has raised a turnip that would weigh twenty-three pounds! California will please to stand back.

—

A HINT TO FARMERS' CLUBS.

MR. EDITOR:—Would it not advance the interests of farming for the farmers, at the close of their club-meetings, to appoint committees to examine the different branches of farming? Let those committees be so arranged that every member shall be on every one of them; then, after the harvesting is done, have an annual meeting, or a neighborhood festival, which may be held in a grove. At these meetings, let each member bring a sample of his fruit, vegetables, grain, corn, butter and cheese. Have a committee to examine the specimens, and give their opinion who has produced the best. Also, at these meetings, have a full report from each committee, giving an account of each farm, the manner of cultivating, and what kind of soil, the

amount raised, and what it cost to raise each article, together with the amount of hay cut, the number of acres on which it was cut, also what part of it was meadow, and what part English; how much meadow land has been reclaimed, and how many rods of ditch has been dug on each farm the past year. In fact, let nothing be left out that is of interest to the farmer. Would not something like the above, advance the interests of farming?

Concord, Feb. 19, 1857. A SUBSCRIBER.

—

A HORSE'S STIFLE.

MR. EDITOR:—I have a colt three years old, that has, in some way, displaced one of his stifles. I observed it first about ten days ago; it does not remain out, but slips out at times. I have applied a bath of three parts brandy, and one part oil of spike, added to about the same amount of the extract of white oak bark, boiled strong. I have applied this remedy without effecting a cure. Can you give a more effectual remedy through the *Farmer*, and oblige a constant reader?

G. W. HAYES, JR.

Dover, N. H., Feb. 19, 1857.

—

REMEDY FOR CURCULIO.

Anything that will prevent the ravages of the curculio must be of great importance. From my own experience, the outer bark or ross of the pitch pine spread around and under plum trees, will effectually do it. The ground covered with the boughs of the same, will probably be as effectual. I wish your readers would give it a trial. It should be done immediately. JOHN E. BULLARD.

Medfield, Feb., 1857.

—

PRIVET PROPAGATED BY CUTTINGS.

Will the privet spoken of in your paper, grow from cuttings, like the currant? If so, can it be had near Boston? C. GRAVES.

Shrewsbury, Vt., 1857.

REMARKS.—It may be propagated by cuttings, by considerable care, but the best way is by the roots. William Hall, of Bradford, Mass., will furnish it.

—

CARROTS ON THE SAME GROUND.

Noticing an inquiry as regards the length of time which carrots may be raised on the same ground, I would just state that I have raised the article seven years on the same piece of ground, and I understand they were raised two years previous to my taking the place; thus making nine years in succession. The ground has always received a heavy coating of green manure, and well turned under and plowed from twelve to fifteen inches deep; seed invariably sowed before the first of June, and a heavy crop, both in size and number of bushels has always been my reward. C.

Chester, Vt., 1857.

—

Mr. SAMUEL A. KING, of Mansfield, has a common native hen, that from April 1st to Dec. 1st, 1856, laid 79 eggs, and hatched and brought up 42 chickens, which were sold for ten dollars. How many imported hens have done as well?

S——S.

RURAL POETRY.

Mrs. Kirkland, in the preface to her "Garden Walks with the Poets," makes a very true remark, to the effect that no one who has not studied English Poetry, with a direct view to finding out how far it illustrates rural life, would imagine our poetic literature to be so rich in works inspired by this glorious theme. Perhaps this general ignorance of the extent to which the charms of nature and the lessons and duties of country life have been made the subjects of poetic inspiration, may be accounted for, by the fact that there are very few long poems in the language, whose themes are directly drawn from rural occupations, and whose object it is exclusively to illustrate the operations of nature, and the demands she makes upon those whose lives are past among her beautiful scenes. We have, it is true, several poems of considerable length, from the Bucolics of Virgil, which have become English through Dryden's translation, to the Excursion of Wordsworth, whose principal object it is to describe the manners and occupations of pastoral life, and to illustrate the peculiar charms of a rustic condition. But our rural poetry is chiefly rich in less labored productions than these, and its extent and variety are made up from the numberless short poems and passing allusions which are scattered all over the literature of every age. The best and truest tributes to the attractions of country life are those that have been used as episodes in illustration of more exciting themes. Certainly no class of subjects can be more various or more entertaining than those which appertain to a rural existence. The operations of agriculture, the observations of nature, the pleasure of watching the gradually expanding and increasing fruits of the earth which come as the reward of judicious labor, in short, all the occupations of body and mind which are imposed by a devotion to pastoral pursuits, are subjects more worthy of the poet's praise than the workings of human passions, or the strife of kings for worldly power. The gentle and quiet spirit which breathes through those poems which are eminently rural in their design, is like the soft music of the summer wind in the pine-tree tops; and if they sometimes approach to the harshness and force of nature in her wildest moods, it is only when they expose the hollowness of a courtly life, and inveigh against the follies of the fashionable world.

We have before us a volume of the "*Rural Poetry of the English Language*," compiled and arranged by Prof. JENKS. We have examined its ample pages with increasing interest, and have had our thoughts newly awakened, by its perusal, to the magnitude of the interests which cluster around the farm, and the beauty and variety of the charms that surround one in the daily performance of its duties. We find gathered in this volume, poems of various length, and from every period of Eng-

lish literature, illustrating not only the fancies that poets are supposed to find in the most common themes, but the real and practical workings of country life. The farm-yard and the garden, the field and the forest, the various duties and employments which the changing seasons bring with them in their course, the out-door labors of seed-time and harvest, and the fireside amusements of the winter months, are each made the subject of the poets' praises, and receive from them due tributes to their importance and their worth. And not only are the beauties which a refined mind sees in every one of nature's operations, enlarged upon and exhibited, in the pen-pictures of the masters of English song, but any one who examines this volume, will find minutely described many of the common labors of the farm, which those who perform them are too often led to imagine of anything but a poetic association. We are well aware that there are many who will disdain the idea of gathering around our country life any such results of the inspirations of nature as mark the poetry of our language. But we think there is no surer way of elevating the taste of our rural population, and of making them capable of appreciating the value of their condition in life and the superior advantages they possess, than by multiplying the evidences that the wise and refined of all ages have held their position in the highest esteem, and have given to it the fruits of their studies and the best thoughts of their minds. Nor do we think that any farmer who examines and takes pains to store his mind with the works of the poets, will be any the less practical in his operations in the farm-yard and in the field. He will not draw his furrow less straight, or handle his "Double Mouldboard" or "Centre Draught" plow any the less dexterously, for remembering the instructions which Virgil gives for the making of that implement, which is to him far from being a "mean subject."

"Of eight feet long, a fastened beam prepare,
On either side the head produce an ear,
And sink a socket for the shining share.
Of beech the plough-tail and the bending yoke,
Or softer linden hardened in the smoke.
I could be long in precepts, but I fear
So mean a subject might offend your ear."

The thoughtful farmer will be apt to rejoice that his avocation has received the benefit of mechanical skill, and that his tools are prepared in a manner rather more suited to his wants than the primitive one above described. The advice in regard to soils, given by a poet of more than a century ago, he will find yet worthy of his consideration. To improve a sandy soil,

"Let stiff, cohesive clay
Give the loose glebe consistence and firm strength.
So shall thy laboring steers, when harvest calls,
Bending their patient shoulders to the yoke,
Drag home in copious loads the yellow grain."

Where stubborn clay is to be made fruitful of good crops,

"Give the plough
No rest. Break, pound the clods, and with warm dungs
Relieve the sterile coldness of the ground,
Chilled with obstructed water. Add to these
The sharpest sand, to open and unbind
The close cohering mass: so shall new pores
Admit the solar beams' enlivening heat,
The nitrous particles of air receive,
And yield a passage to the soaking rain.
So shall the strong field to the reaper's hand
Produce a plenteous crop of waving wheat."

In the care of trees, their culture for fruit or shade, their beauty in the landscape, and their various uses, the poets have not discarded the practical, in their love of the beautiful. We turn again to Virgil, and find him as careful in his rules of management, as the proprietor of a modern nursery who raises his trees for market. We copy his advice for transplanting.

"Some peasants, not t'omit the nicest care,
Of the same soil their nursery prepare
With that of their plantation; lest the tree,
Translated, should not with the soil agree.
Besides, to plant it as it was, they mark
The heaven's four quarters on the tender bark,
And to the north or south restore the side
Which at their birth did heat or cold abide."

We make our quotations practical, purposely, but these are by far the least important passages. It is not the manner of farm management, or rules for practice in individual cases, that give value to such a work as the one before us. It is to invest the necessary duties of our daily life, and the unavoidable anxieties which wait upon toil, with the charms that a true appreciation of nature is capable of throwing around them. It is to have means of rest and relaxation of the best kind always at hand, and, when the body is worn out with the fatigues of the day, let the gentle exercise of the mind bring it back to a condition of ease and comfort, more welcome than any to be derived from a dull and lazy yielding to idle dreams. It is to show that around the drudgery and hard work which must be done on every farm, as they cannot be escaped by any condition in active life, nature and art and literature have aided to place the means for a succession of the most lasting and satisfying enjoyments.

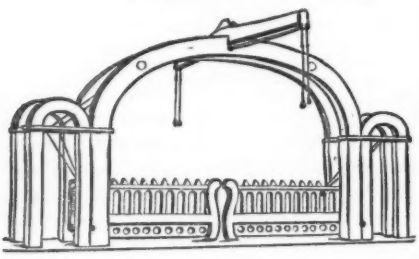
With the volume before us we are pleased, because we hope it is a step towards an awakening interest in the pursuits of agriculture, not as a fashion or a caprice, but as a source of true happiness, and as the nearest approach the condition of society affords to a state of virtuous and innocent enjoyment.

The work was undertaken by Prof. JENKS from a pure love of nature, and with a desire to increase the popular appreciation of all the associations which give life to rural scenes. We find the volume not without faults, and there are some omissions which seem to us too important to pass without comment. Not one line of Wordsworth

appears in the whole book, and our American poets are not quoted as much as they deserve. It is with great pleasure that we notice the dedication of the work to Hon. MARSHALL P. WILDER, who "by title of his long, intelligent, generous and successful exertions" in the cause of agriculture and kindred subjects, well merits the compliment thus appropriately bestowed. The index of the volume is one of its most perfect features, and deserves especial comment, because it is a matter too often neglected or improperly performed.

We fear it has missed one essential element of popularity, in being so heavily made up, but we hope also that Prof. JENKS may turn his attention to this slight defect, and give us another volume of Rural Songs, arranged with the excellent taste and the elaborate care which mark his present work.

A NEW GATE.



The above cut represents a Gate of recent invention by L. SMITH, of N. Easton, Mass. This is the second one of his invention, both of which have a vertical movement, and take no ground to swing upon beyond the width of the posts. The one represented above differs from his first, by its turning upon a crosstree near the lower corner of the gate, hung to low posts on each side of it. This crosstree being two feet or more in length, framed or bolted to the gate, prevents all vibration to the same, thereby rendering great strength to it. It is opened and closed very easily, being balanced by weights made fast to, and elevated over the crosstree. It is also calculated to be opened and closed without leaving the carriage. This is done by having an arm at the top of the arch over the carriage-way, and at right angles to it, extending a proper distance from the gate. From the ends of this arm ropes are suspended, and in the reach of the driver; this rope is carried along the arm and down the archway to the gate, and fastened to it, in a proper place, so that by pulling the rope the gate rises to an angle of forty-five degrees; then by giving immediate slack to the rope, the weight will open it in full. After passing through the arch the same operation is to be performed in closing the gate with a similar rope, and operated presisely in the same way as in opening. These gates can be made from the most rich and fanciful designs. In the above design the small arches at the sides of the carriage-way are intended to screen the gates from view when open; and when closed, leave an opening for persons on foot to pass through. A small model of this gate can be seen at the new Hall of Arts, corner of Essex and Lincoln Streets, Boston. The inventor is prepared to build gates of the above description, also, those of his first invention, which he advertises in the *New England Farmer*.

For the New England Farmer.

HORSES' EARS AND COWS' TAILS.

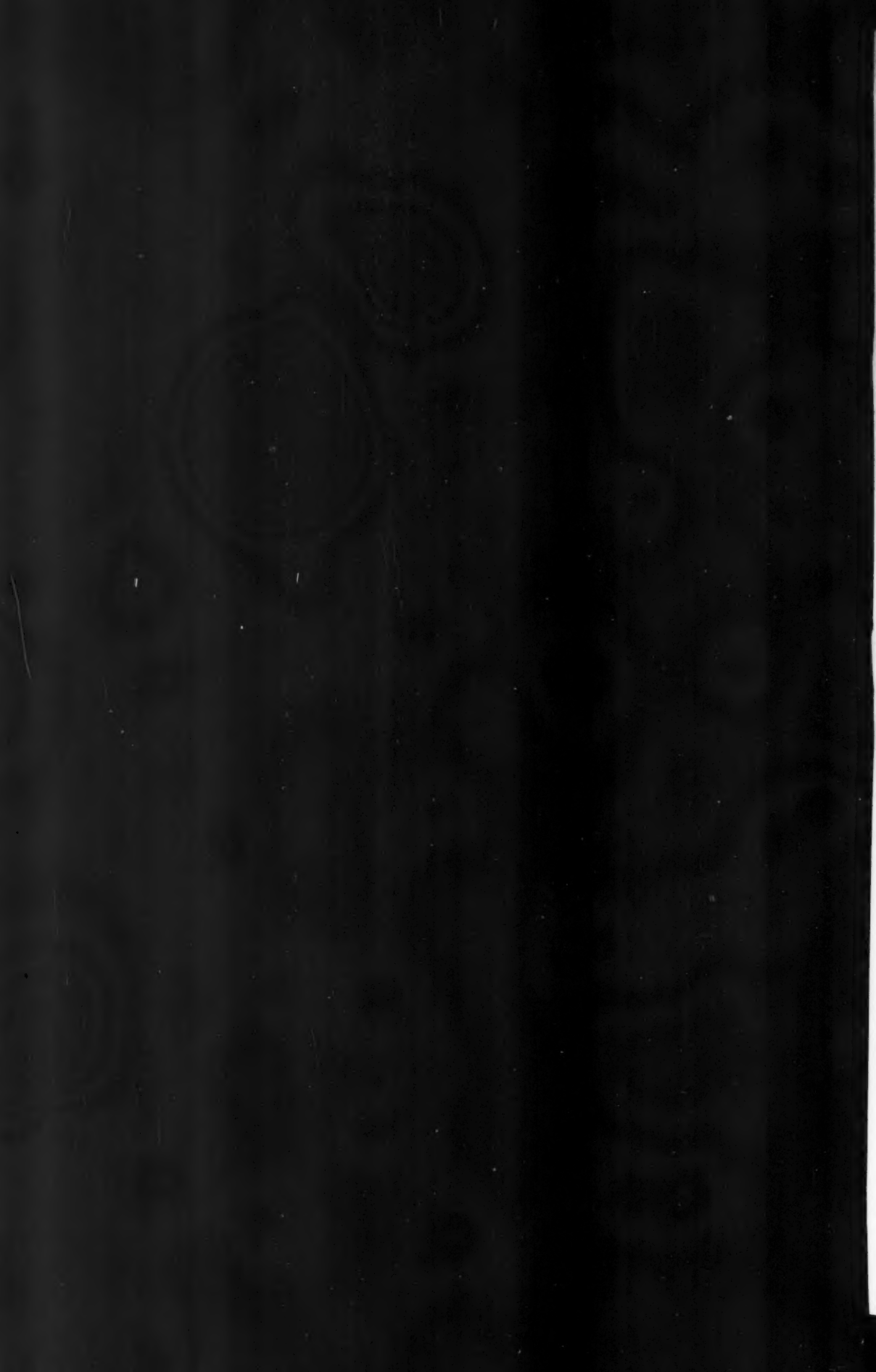
MR. EDITOR:—Something was published in the *New England Farmer*, a year or two ago, about the sensibility of horses' ears, or rather the sensibility or nervousness of a horse manifested by the motions of his ears. The article appears in the monthly number of the *Farmer* of Dec., 1854, page 558. I make the following extract:

"The ear of the horse is one of the most beautiful parts about him, and by this is the temper more surely indicated than by its motion. The ear is more intelligible than the eye; and a person accustomed to the horse, can tell by the expressive motion of that organ, almost all that he thinks or means. When a horse lays his ears flat on his neck, he most assuredly is meditating mischief, and the bystander should beware of his heels or his teeth. . . . The hearing of the horse is remarkably acute," &c.

I would add that my own experience confirms the truth of the above, and so would every man who would look into the case. In driving a horse in a carriage, he appears to be sensitive to the least motion, or talking, or noise, in the carriage behind him. Hence a horse, well-trained, readily knows every word of command. When he is in full gait, and all appears right behind him, his ears will *look forward*, if I may be allowed the expression—that is, his ears will be erect, straight ahead; but if you lay the lash upon him, his ears immediately turn back to perceive what you are about. But if you strike him very lightly, or give him a light tap on his right side, he will immediately turn back his right ear, but not the left; but if you just touch his left side, he will turn back his left ear only.

BUT NOW FOR A PARAGRAPH UPON COWS' TAILS.

The tail of a cow appears to be as sensitive as horses' ears. If any one doubts it, let him become acquainted with the milking of them. Some cows keep their tails tolerable still while milking them, but if you happen to change your position while milking, or even stop milking a second or two, *flap goes the tail* beside your head; no matter how besmeared it is, you have got to take it; and when you arise from your milking stool, having finished milking, *slap comes the tail* to bid you adieu. I have a remembrance of an instrument to prevent a cow from taking rash liberties with her tail. Turning to the *New England Farmer*, monthly, of 1854, page 353, you have the instrument thus described: "*Cow Milkers' Assistant.*—This little implement will prevent a good deal of *swearing*. So you see it has a moral bearing. Notwithstanding the practice is wicked, vulgar, and ungentlemanly, a good many persons who milk cows swear more than 'our army did in Flanders,' when *provoked* thereto, by a



rousing switch in the face with a vigorous cow's tail. It *does* rather disturb one's equanimity, especially if the animal has just risen from her bed, where the tail has been recumbent in what certainly *will give* color and fragrance to the rose; but we should not be willing to jeopardize our veracity by saying that it is either of them in its present form."

The instrument is described and shown by a drawing in the above page of the *Farmer*, and the writer says: "It is made of brass, is perfectly simple, and will be wanted by all who have not razeed their cows' tails. The Hon. JOHN M. WARE, of Seabrook, N. H., is the inventor of the implement, and, we understand, has received a patent for it." Thus a cow's tail appears as sensitive as a horse's ears.

Mansfield, 1857. ISAAC STEARNS.

For the New England Farmer.

WHAT WILL YOU DO WITH THAT DEAD ANIMAL?---No. 1.

Pay your neighbor a dollar to drag the remains to the sea, and give them to the waves? But friend, don't you remember what a nuisance you found that corrupt carcass to be, that was drifted to the beach last year, what a wide berth you gave it when collecting kelp and sea-weed, and what hard words were squeezed out of your contorted visage by the awful stench? Perhaps, too, you chanced to notice what a nuisance it was to others beside yourself; that it tabooed quite a region around, and as effectually excluded it from the approach of the convalescents, who came for a breath of pure ocean air, of the excursionists from the city, who had fled from their hot, dusty, noisome prison for the boasted purity of the sea-side, or of those cultivated minds who came to appreciate all that was beautiful, and were equally sensitive to all that was disgusting, as though the whole immediate neighborhood had, for the time being, been fenced in against all approach. Had he who was once owner of that dead animal, in person taken possession of that spot, and prohibited all approach for a given time, under pains and penalties, what an outcry we would have raised against him! And yet, my friend, are you not shrewd Yankee enough to perceive that the transgressor north or south of you, who set that nuisance afloat, while it remained there, really did prohibit all approach to the desecrated spot under pains and penalties? And all the while you were within the polluted region, didn't you feel that blame ought to rest somewhere? Now then, brother, are you a Christian, or a barbarian? Will you stick to what may be your legal rights, or will you waive your legal rights that you may do what is morally, *really* right? Will you do unto *many* as a certain one did unto you, or will you the rather do unto others, as you would have others do unto you?

But perhaps you live in the country, and drag out your carcasses into some bye-place where people seldom or never pass, though nine chances to one, people are more cosmopolite than you calculate on, and are often annoyed by the stench. There is a wide difference between concealing the remains, and concealing the foul gases which arise from it, and this latter is by far the greater annoyance. But, presuming one farmer to have done a Christian act, and so disposed of the animal he has been so unfortunate as to lose, as that it can give no offence to any of the senses, is he certain that it will not attract the crows, and better them, and keep them in the vicinity to make him plenty of work next season when his corn starts?

Thus far, we have considered a carcass as of no value, but purely an encumbrance, which we are in duty bound so to dispose of, that it shall not be a nuisance to others. When the poor creature dies, we are certainly done with all the capacities with which life endowed it, we are done with its soul, but by no means with his body, if we are prudent men. The carcass of a horse in the city of New York is valued at $17 50; there the flesh, the bones, the entrails, the fat, the hoofs, the skin, the hair are readily disposed of; but let us affirm that none of these markets are profitably accessible to the farmer, is the carcass then of any value to him? The reason why the animal is removed far from the premises, is because of the exceedingly disagreeable effluvium which escapes during the progress of decomposition. *This is the weightiest reason why it should by all means be used as a fertilizer.* For chemistry tells us that the value of manure is, as a general rule, in proportion to the strength and disagreeableness of the odor escaping from it during the process of decomposition,—a rule which ranks animal remains at the head of all manures. Why, then, will the intelligent and prudent farmer be at pains to throw away a carcass, and yet add with increasing and most praiseworthy industry, muck, leaves, and litter of all kinds, to his manure pile? Let him be consistent, and not studiously reject that dead horse, cow, or ox, (either of which is, at a low estimate, equal in fertilizing power to half a cord of good barn manure,) and still go seeking after refuse, some of which can hardly be ranked higher than an absorbent.

The bones make a large portion of the weight of an animal, and these no one can afford to waste, as they contain that precious phosphate which enters so very sparingly into, and yet is so essential to all soils. These, after the decomposition of the fleshy parts, may be coarsely broken with other waste bones in a bottomless barrel resting on a smooth stone, and scattered over the soil; or they may be burnt with the refuse of the tillage land, and then pulverized and scattered; or dissolved in a wooden vessel by diluted sulphuric acid; or finally, buried in the soil below the reach of the plowshare, near those hungry trees whose roots will envelop them in a network of fibres, and enjoy them as choice morsels.

But perhaps it is objected that in the winter season the remains are unmanageable. When the frost is but an inch or two in depth, it would be no great labor to bury them three or four feet below the surface, that the gases may not escape, than letting them permanently remain, if it should be thought best to give the strong stimulant to fruit trees, or vigorous grape vines; and we will guarantee that the effects will be seen in the wonderful increased vigor of the trees or vines for many years. If the farmer should desire hereafter to remove the fertilizer, he will of course select the locality, and mark the spot with reference to this. If the soil is frozen too deep to be opened, the carcass might be dragged to some convenient spot, and a cartload of muck from the compost heap be thrown over it, which would serve to prevent decomposition until in some portion of the tillage land, the soil should be sufficiently thawed to allow of enough earth being added to make a good compost heap when all shall be decayed. It may be hardly necessary to

state that as long as animal remains are in a frozen state, there will be no decomposition. In whatever way the animal remains are returned to the soil, provided the gases are not permitted to escape, we assure our brother farmer that if he has not witnessed their stimulating power, the effects will surprise him. A seedling tree standing near others of the same kind, which, well manured, grew but a foot in height, feeding on animal remains, made a growth of over four times that height in the same period.

Clement Hoar, in his valuable work on the cultivation of the grape vine, page 58, makes the following remarks: "The entire carcases of animals, or any portion of them, dead birds, &c. &c., independently of their bones, yield after decomposition an extraordinary supply of food for the roots of vines, impregnating the soil all around with a great variety of nutritious matter. Dead animals of every description, such as dogs, cats, pigs, &c., may be thus disposed of in a most advantageous manner, by depositing them in their entire state in the vine border." J. J. H. G

Marblehead, Feb., 1857.

LEGISLATIVE AGRICULTURAL MEETING.

[Reported for the Farmer by H. E. Rockwell.]

The *Seventh* of the series of Legislative Agricultural Meetings was held Tuesday evening, and the attendance was very good. The subjects discussed were, "Fruit and Fruit Trees—Forest and Shade Trees."

At the appointed hour of opening the meeting, Hon. Charles W. Upham was called on to preside, who, on taking the chair, said:

Gentlemen, I thank the Executive Committee for the honor they have done me in asking me to preside over the deliberations of this meeting. Officially and personally, I am deeply interested in the objects for which you are assembled. Although not a farmer, and having no personal experience in the line of the interests which bring you together, I speak simply the truth when I say that no subject has more engaged my imagination, my speculations and my interest as a citizen, than that in which you are engaged.

The people of Massachusetts, in their past history, have developed, in a style that has excited the admiration of the world, an eminent genius in commerce, in manufactures and in the mechanic arts. That same genius, in my belief, remains to be developed, and is about to be developed in the department of agriculture. In the earlier periods of the country, the comparative sterility of the soil, the severity of the climate, and the privations which the early settlers were subjected to, of every kind—want of capital and want of means of communication—naturally turned their thoughts to the sea, to the fisheries, to navigation and commerce. Gradually commerce brought in manufactures and the mechanic arts; internal improvements and great works of inter-communication have been the result. But these results have created a density of population and a multiplication of wealth within the limits of our State, which are already beginning to produce a most visible effect upon the department of agriculture. The State is covered over with large towns which are continually expanding into the constitutional dimensions of populous cities; and thereby a market, as it were, is carried to the door of every farmer, and the whole interior of the State is partaking of the character and the advantages of a suburban territory.

At the same time a system of education has been developed in Massachusetts, through the agency of our public schools, which is calling out all the latent genius of the people; and as agriculture is absorbing the energy and the talent of the people, this development of the intellect is arming the labors of the agriculturist with a power to produce results, such as only intelligence and science can impart. I believe, gentlemen, that we are entering upon an era that will result in converting this Commonwealth of Massachusetts into one widespread garden; I believe that the people, having their thoughts turned to such subjects as are to occupy you to-night, will be led to conclusions, the result of which will be seen in the diffusion of a universal culture over all our hills and over all our meadows. The time will come when those great salt-marshes which line our sea-coast will be diked in and protected from the inroads of the sea, and thus converted into blooming prairies as fertile as any in our own great West. The time is coming, it is beginning already to be seen, when taste and art will festoon our rugged hill-sides with flowers and fruits, and when on the barren and denuded ridges of the southern cape, and on the shores of Essex county, such a forest, as the pilgrims beheld when they first made the land, will again appear. That, gentlemen, I understand is one of the objects upon which you are to consult this evening—the introduction and culture of forest trees.

Before entering upon the discussion of the subject an opportunity was given to Mr. Fay, as the Secretary of the Massachusetts Agricultural Society, to announce the following vote of that Society:

"*Voted*, That a premium of $250 be offered for the best practical essay on the comparative economy of horses and oxen for farming purposes in Massachusetts;—the offer of said premium to remain open until the first of January, 1858, and the premium not to be awarded for any essay which shall not be considered by the Trustees of sufficient practical value to be worthy of publication in the transactions of the Society."

Mr. Fay said the Society desire to get the result of a series of practical experiments, testing the economy of labor by horses and oxen, as to cost of keeping, the products of their labor in plowing, mowing, carting or drawing, in any of the operations of the farm. The subject assumes considera-

ble importance in connection with the labor of mowing with machines, and as it has never been tested thoroughly in this country, the society hope to have such a series of experiments made as will be of permanent value.

Mr. FAY then spoke of the subject for the discussion of the evening. He said he had formerly thought any piece of waste land could be converted into a forest by simply planting trees. He had believed that he might safely act on the theory of the Scottish farmer, who said to his boy, "Jock, be aye planting a tree; it will grow while you are sleeping." But he had found that although he planted trees, they did not become a forest very readily. A great deal of time is required to cause a forest to be produced. He remarked that it would be generally found whenever an oak forest was cut down a pine forest would succeed; and on the other hand when a pine forest was cut down, an oak would spring up. These sprung up from seeds that had long lain in the ground. Dr. Holyoke, fifty years ago, planted one hundred and fifty acres of the land now occupied by Mr. Fay, with acorns, and the seeds of maple and other forest trees. They are now only a few feet high. The true way to secure a forest is to prepare both the ground and the trees in a suitable manner. He raised oaks from the seed planted in a nursery, and then transplanted into soil prepared to receive the young trees. From his own experiments of ten years, he would say that the only way to realize good trees was to sow the seed in a nice plot of ground, and after two years transplant them to properly prepared soil.

Mr. FLINT, Secretary of the Board of Agriculture, desired to ask Mr. Fay whether he would treat soft wood trees like pine in the manner he had suggested. He had seen large tracts covered with pines sown on the soil where they now are, and are very flourishing. On the island of Nantucket the raising of forest trees has been attracting considerable attention. There they sow the seed broad-cast, and harrow it in, sometimes with oats and sometimes with other crops.

Mr. FAY said that on a sandy soil, pine seed will often do very well, sown in the manner stated by Mr. Flint; but in his own experience, he had found it much better to sow the seeds in a nursery and then transplant. When the seed is sown broad-cast, the growth is rather uncertain; but by transplanting from a nursery, the certainty of the crop is secured. In France, where the economy of culture is observed, they always transfer both hard wood and pine from the nursery. If the soil is without other shrubbery, and has grass to protect the small pines, it is rather safe to sow broad-cast.

Mr. HOWARD, of the *Cultivator*, spoke of experiments made by Mr. Gardner, of Nantucket, with a peculiar kind of pine, called the maritime pine—the same species that is cultivated in France. That stands the sea winds better than any other species of pine.

Mr. SHELDON, of Wilmington, said that in 1805, he lived with a farmer in Danvers, who owned a poor lot of land in Reading. It was worth not more than $4 or $5 an acre. Eleven acres of the land were plowed by himself and another young man, and sowed with white pine seed. Thirty years after, when passing by the field, Mr. Sheldon saw a man cutting the wood, and asked him to let him know the quantity per acre. The growth was white pine, pitch pine and white birch, and the yield was forty cords per acre. He was satisfied it was no matter how poor the soil is for white pine. When land is made as poor as it can be, if pitch pine then grows upon it, and is cut off, a tolerably good crop of rye may be raised, showing that it rather enriches than impoverishes the land. From some experiments he had made with white pine, he had found that for many years they increased their growth at the rate of fifteen per cent. per annum.

Mr. WETHERELL spoke of the importance of planting shade trees. In this connection he said he did, while a member of a School Committee, use his influence to have shade trees planted around the school-houses of the town, where there were none. Though promises were made that trees should be planted, the houses are still without them. These facts were stated to show how great is the want of interest in planting trees to beautify public grounds. The matter has been greatly neglected. He knew of few school grounds where there were any trees; and often there is no land except the highway, in connection with school-houses. He urged most earnestly the formation of tree-planting associations in each town. The difficulty of causing forest trees to live and grow well when transplanted, after they attain considerable size, is mainly owing to the failure to dig deep enough to get up the tap root, with a sufficient number of the branching and fibrous roots. He said that chestnuts did not require a sandy soil, as some agricultural paper had stated.

Mr. WOOD, of Orange, spoke of the experiments he had made successfully in transplanting forest trees. He thought there was little difficulty in causing them to live and thrive, if great care was taken to secure many of the roots in a sound state. He considered the rock maple a tree that exhausted the soil very much—perhaps more than any other tree. The butternut also exhausts the soil very much. He also said that the chestnut requires a light, but not a sandy soil.

Rev. LUTHER FARNHAM, of Boston, thought that farmers would be much more readily induced to plant shade trees, and especially in villages, if they could realize how much they would add to the value of their lots. A house lot will sell for one-third more, in many places, if trees are growing upon it.

The planting of shade trees in East Boston is believed by the owners of lots there to have added very much to their value. Where a church is surrounded with beautiful trees, a good congregation may be expected, rather than where there are no such embellishments. He had somewhere seen a statement in favor of planting evergreens thickly by the side of the deep cuts on railroads, to prevent the snow from drifting into them. If that would accomplish the object, he hoped experiments would be tried.

Mr. HYDE, of Newton, said there was no difficulty in raising walnuts, chestnuts and oaks from the seed, but there was a difficulty in making them live when transplanted. He had tried the plan of digging down about three feet, and putting a board in the ground at that depth, and then filling the trench and planting walnuts, so that the tap root should not run so deeply; but he had found that the root would run off when it reached the board, and then go down again. Lately he had tried digging down by the side of the row of walnuts, and some other trees, to the depth of a foot and a half, and then running a spade under them so as to cut off the tap root. This had had a good effect, preventing the roots from running too deep, and causing a thicker growth of fibrous roots. Chestnuts should not be covered more than a half an inch, and may be transplanted when two years old. They often grow scrubby when planted from the seed. To make a straight tree he had found it best to cut off the shrub close to the ground when two years old; they then start up vigorously and grow straight. He had not raised pines from the seed, though he intended to hereafter. He had been accustomed to take the small pines that come up in pastures, when very small—from two inches to a foot or more in height.

Hon. J. W. PROCTOR stated that Mr. FAY—he had then left the hall—offered, about eight years ago, premiums of $1000 from his own purse, to be paid at the rate of $100 a year to those who would grow an acre of oaks most successfully on common pasture land in Essex county. It was believed that the farmers would be interested in the subject, and that they would many of them try the experiment. But at the end of the second year, the Committee of award found that nobody had planted any trees except Dr. Nichols, of Danvers, on his farm in Middleton, and the farmer of Mr. Fay himself, on his farm in Lynn. Dr. Nichols planted the acorns on a hill, in rows about four feet apart, putting several acorns in a hill, as we plant corn. They came up, and at the end of three years were from six inches to two feet in height, very generally throughout the land. Some of the acorns were of the English oak, and some of the common white oak, and the English oak grew much the best. The premium was awarded to Dr. Nichols. On the land adjoining the field planted by Dr. Nichols, there were many white birches, among which the squirrels had planted acorns, and the conclusion to which I came, said Mr. Proctor, was that they knew much better how to cultivate them than men did.

Mr. SHELDON then spoke of his experiments in cultivating apple trees. He said that many believe there is no profit in an orchard. Perhaps when all take as much pleasure in cultivating fruit trees as he did, it may not be profitable to cultivate fruit, because it will be so plenty; but so long as only one-third of the trees in an orchard are good for anything, as is the case in many places now, there was no danger. Several instances were related by Mr. S. to show how profitable the cultivation of orchards may be. He recommended plowing the ground in an orchard as late as possible before the frosts of winter set in, that the worms may be destroyed. He concurred in the belief that the setting out of evergreens near railroads would tend to prevent drifts; and he also thought that railroad corporations would save themselves much expense in consequence of damage from fire in swamps, if they would set out willows thickly near their track. A growth of willows would check the sparks from the engines, he had no doubt.

Mr. J. W. BUCKMINSTER, of the *Ploughman*, spoke earnestly in favor of setting out shade trees, and rather controverted the idea of Mr. Wetherell that it was difficult to induce people to do it. He spoke highly of the hemlock when cultivated as an ornamental tree; it might be trimmed, and would make a very thick and beautiful hedge. As to the time of setting out evergreens, he thought they should not be set out in the fall, but in summer, when the buds are beginning to start. The life or force of the tree is then most active.

Mr. WARD confirmed the idea that the time for setting out evergreens was when the sap was starting, and related the results of his own experiments in transplanting some firs from a swamp at that season. Not one in ten died.

The President, Mr. BROOKS, then announced the subject for the next evening to be "Farm Implements." He expressed the thanks of the Executive Committee to Mr. Upham for the honor he had done the meeting by consenting to preside over it.

Mr. UPHAM, in response, thanked the President for the sentiment he had expressed. He regarded it as a very interesting circumstance that it happened to fall to his lot to participate in the deliberations of this evening, considering the subject. It was his happiness to live in one of the oldest towns of the State—the old town, now the city of Salem—once the mart of the East India commerce of the country. But her commerce, to a great extent, has deserted her wharves; once the great centre of the accumulation of capital in several branches of

trade in the country, but that capital seeks other and more populous seaports. But the people have, in lieu of that, turned their attention to the cultivation of fruit and fruit trees; and near all the old houses that line some of the streets of the city, there are beautiful and flourishing ornamental trees, both shade and fruit trees. In the windows and the front yards you will see flowers blooming. It is a city of trees and of flowers; and it is hardly necessary to remind those interested in horticulture and floriculture, that the grape culture has been carried to a greater perfection, and met with greater success in that city than in any other spot on the Atlantic slope of the continent. Under the lead of Manning, Lee and others, that city has become noted for these things. I am satisfied, said Mr. Upham, from what has been said this evening, that both of the topics that have been considered are important, not only as matters of taste and luxury, but of more importance to the welfare, growth, prosperity and distinction of this old Commonwealth.

TO RAISE GIANT ASPARAGUS.

The writer in one of the early volumes of the *Horticulturist*, (Mr. Downing, we believe,) tells how to grow common asparagus so that it will always rival any giant production. He says:

Every one who has seen my beds, has begged me for the seed—thinking it a new sort—but I have pointed to the *manure heap*—(the farmer's best bank)—and told them that the secret all laid there. The sight was only such as might be in every garden.

About the first of November—as soon as the frost has well blackened the Asparagus tops—I take a scythe, and mow all down close to the surface of the bed; let it lie a day or two, then set fire to the heap of stalks; burn it to ashes over the surface of the bed.

I then go to my barn-yard; I take a load of clean, fresh stable manure, and add thereto half a bushel of hen-dung; turning over and mixing the whole together throughout. This makes a pretty powerful compost. I apply one such load to every twenty feet in length of my asparagus beds, which are six feet wide. With a strong three-pronged *spud* or fork, I dig this dressing under. The whole is now left for the winter.

In the Spring, as early as possible, I turn the top of the bed over lightly, once more. Now, as the asparagus grows naturally on the side of the ocean and loves salt water, I give it an annual supply of its favorite condiment. I cover the surface of the bed about a quarter of an inch thick with fine packing salt; it is not too much. As the spring rains come down, it gradually dissolves. Everything else, pigweed, purslane, all refuse to grow on the top of my asparagus beds. But it would do your eyes good to see the strong, stout, tender stalks of the vegetable itself pushing through the surface early in the season. Ido not at all stretch a point, when I say that they are as large around as my hoe handle, and as tenderand succulent as any I ever tasted. The same round of treatment is given to my bed every year.

AGRICULTURAL LIBRARIES.

A movement is to be made in the New York Legislature, to secure the purchase of good Agricultural works for the Public School Libraries of the State. The design is to supply a standard class of such works to all our Public Libraries, so that the children of the State may be educated in one of the most useful branches of knowledge.—The books are to be supplied at a very low rate, so as to make the cost to each School District not exceed $25. We regard this as a desirable movement. Good agricultural works would be of more actual service in our school libraries, than are nine-tenths of the books now found upon their shelves.

We are glad to see this movement to introduce good books upon agricultural subjects among the persons occupied in that calling. There is little or nothing yet in our town libraries, on agricultural affairs, that the young man can get hold of, which would be of any importance to him. But there are some twenty volumes, which, if carefully perused, would be of more service to any studious, reflecting and observing young farmer, than a present of one hundred dollars. But if these works were introduced into our public schools, forming the nucleus of a *public school library*, to be used occasionally as one of the reading books, and then taken out by the pupils under certain regulations, the effect would be to increase the intelligence and virtue of the community, and its industrial prosperity, and consequently swell the annual revenues of the State. The indirect effects of such a movement would be better buildings, bridges and roads, broader and more productive fields, the introduction of new trees and plants, and an increased thrift and prosperity in all the other pursuits of life, as well as that of rural industry itself. All this would spring from a study of these works, because it would dignify and ennoble the calling in the mind of the tiller of the soil, and give him self-respect and contentment by qualifying him to converse with the learned and to better understand the powers and operations of nature about him. We believe in books. For ourself, we feel almost entirely indebted to them for whatever knowledge we have been able to gain, and that, too, during the intervals of an active labor upon which has depended our comforts of life.

When will Massachusetts, usually in the front ranks of any enterprise that will benefit her sons, take a decided step in this good work!

FIRE INSURANCE.—The writer, "P. B. P.," on this subject in another column, will please accept our thanks for his lucid and timely article. Many readers may find it worth more than a ten years' subscription of the *Farmer* to them, if they give it some attention.

☞ A restlessness in men's minds to be something they are not, and have something they have not, is the root of all immorality.

For the New England Farmer.

ON THE RELATION OF TREES TO THE SOIL AND THE ATMOSPHERE.

NUMBER ONE.

BY WILSON FLAGG.

One of the most important inquiries that can occupy the attention of the American public, with reference to our future agricultural prosperity, is the relation of trees to the soil and the atmosphere, and the consequent dependence of climate upon the preservation of our forests in certain situations. All persons understand and admit their importance for timber and fuel; but they are too apt to overlook the intimate connection between soil and climate, and the quantity and situation of trees and forests. In the present series of essays, I shall speak of trees as they affect the temperature and humidity of the atmosphere, and the salubrity of our climate. From a variety of well-authenticated facts, and from actual experiments, the dependence of the atmosphere on trees, for preserving its electric equilibrium, has been made apparent, though its full dependence on them is not yet clearly demonstrated. We have yet to learn many new facts and principles; but the subject of my present inquiries is comparatively new. The field is almost entirely unexplored. So few experiments have been made with direct reference to it, that an intelligent and persevering experimenter might in a few years bring to light some most interesting results.

Brande remarks in his Chemistry—"As the plant advances to perfection, it becomes dependent on the air and soil for its nutriment: the roots absorb moisture and other materials; and the leaves, while they exhale moisture, frequently absorb carbon from the carbonic acid present in the atmosphere, and evolve oxygen. This evolution of oxygen takes place while the plants are exposed to the solar rays, and appears one of the most efficient causes of the purification and renovation of the air."

"Under certain circumstances, the leaves of plants also absorb a considerable quantity of aqueous vapor and water, as is shown by the resuscitation of a drooping plant, on sprinkling it with water, or exposing it to a humid atmosphere. It is probable that in healthy vegetation, the absorption of water by the leaves takes place chiefly in the night, and that their principal function in the day is that of transpiration."

It is not probable, however, that any vital absorption of moisture takes place in the foliage of plants. Their resuscitation when exposed to humidity, after being wilted, is the effect of mechanical or hygrometric absorption, and ceases as soon as the leaf is saturated with moisture. Hence the quantity of moisture absorbed from the atmosphere by the leaves of plants bears no proportion to that which they transpire.

As the leaves of trees and other plants have the power of exhaling moisture into the atmosphere, the humidity of this element must be greatly dependent on them for an equal, regular and abundant supply. A few simple experiments will prove how much more rapidly and abundantly this evaporation will take place when the earth is covered with plants, than when its surface is bare. Take two cups, and pour into each of them half a pint of water. Place them on a table side by side. Insert into one, the cuttings of any description of growing plants, and let the other stand without them. In the course of about four hours, it will be found that the water has entirely disappeared from the cup containing the plants, while the water in the other cup is not perceptibly diminished. The water from the empty cup has been carried into the atmosphere, first by the absorption at the stems, and second by the exhalation from the leaves of the plants. We may judge from this experiment, that a vastly greater proportion of moisture must be exhaled into the atmosphere from an acre or any other given extent of the earth's surface, when covered with vegetation, than from the same amount of surface, either of naked soil or even of water; and that plants must be the general cause of the humidity of the atmosphere, although the ocean is the ultimate source of all the waters of the earth. Without plants the earth must be a dry desert; as the evaporation from the ocean would not, under present circumstances, be sufficient to keep the atmosphere in a saturated state.

Admitting all this to be the effect of vegetation, we must conclude that trees are more powerful agents for this purpose than any other species of vegetation, since by means of no other kind of plants can an acre of ground be covered by so great a quantity of absorbent rootlets or exhaling foliage. It is also to be taken into the account, that trees do not in general prevent the growth of herbaceous plants. When trees are very compact, as in a forest, there is not much undergrowth; but the amount of transpiring foliage in one of these dense forests must be immense. Where trees are standing at moderate distances apart, as in a grove or an orchard, the vegetation under them is generally almost as abundant, as in similar places unsupplied with trees. If a mere handful of plants will drink up half a pint of water in twenty-four hours, and exhale at the same time an equal quantity into the air, we can easily imagine what an immense quantity must be exhaled by the whole vegetation of the country, and how infinitely it must exceed the amount evaporated from the same extent of ocean surface, during the same time. If we continue this process of reasoning, we shall soon learn why any large extent of country becomes wasted by drought, when its forests are destroyed.

It becomes manifest, from these facts and considerations, that any country which is well covered with trees and other vegetation will be more equally and abundantly supplied with rain, than a country similarly situated which is destitute of trees. In the latter case, rains will be produced chiefly by meteoric agencies, they will be more nearly periodical, and come in the shape of inundating torrents, instead of frequent and gentle showers. The earth would be periodically flooded about the time of the equinoxes, but the summers would be visited with fatal droughts. But when the earth is covered with a due proportion of forests, standing in those situations in which they will act most favorably upon the climate, an equal and uniform humidity of the atmosphere is preserved by the constant exhalation of moisture from the foliage of the trees; and frequent rains are the consequence.

Mr. Balfour, an English botanist, remarks, "When forests are destroyed as they are everywhere in America, with imprudent precipitation, the streams are everywhere dried up, or become less abundant. In those mountains of Greece which have been deprived of their forests, the streams have disappear-

ed. The inconsiderate felling of woods, or the neglect to maintain them, has converted regions noted for their fertility into scenes of barrenness. The sultry atmosphere and the drought of the Cape Verd Islands are attributable to the destruction of forests. It is stated that in large districts of India, climate and irrigation have rapidly deteriorated from a similar cause, and that the government are now using means to avert and remedy the mischief. In wooded countries where the rains are excessive, as in Rio Janeiro, the climate has been improved by the destruction of trees. Gardner says that since the axe has been laid on the dense forests surrounding the city of Rio Janeiro, the climate has become dry. In fact, so much has the quantity of rain diminished, that the Brazilian government was obliged to pass a law, prohibiting the felling of trees in the Corcovado range."

Dr. Cleghorn remarks, "that the conservation of forests is unquestionably a subject of great importance. It is now occupying the attention of the government of India, and of many other governments. The physical history of every country proves incontestably, that a moderate extent of forests, especially on mountain slopes, and elevated rocky ground, where tillage is impracticable, promotes to a high degree both the agricultural and manufacturing interests of individuals, as well as the physical soundness and productive resources of extensive countries. It appears that the influence of forests, in a physical, economical and hygienic point of view, is deserving of more complete investigation than it has yet received. By felling trees which cover the tops and sides of mountains, men in every climate prepare at once two calamities for future generations—the want of fuel and the scarcity of water."

If I may quote from myself in another journal, I would not assert that the foliage of trees produces more humidity by exhalation than the same amount of foliage of herbaceous plants. The latter are indeed proportionally more active perhaps than the leaves of trees. But a square acre of ground, when covered wiih trees is productive of a vastly greater quantity of foliage than a square acre covered with any description of herbaceous plants; and as the roots of trees penetrate deeper into the soil, than those of other plants, they draw up the moisture from a greater depth, and do not, therefore, in the same proportion, exhaust the humidity of the surface. To this influence of forests upon the humidity of a climate, we may reasonably attribute the fulness of the streams in all parts of this country a century ago, compared with their present diminished bulk. This is a matter of common observation, sustained by indubitable proofs. In the same way we may account for the increased frequency and severity of droughts, and the unequal apportionment of rain, throughout the season, as the woods have disappeared before an increasing population.

Humboldt remarks (as quoted by Balfour,) "plants exhale water from their leaves, in the first place for their own benefit. But various important secondary effects follow from this process. One of these is maintaining a suitable portion of humidity in the air. Not only do they attract and condense the moisture suspended in the air, and borne by the wind over the earth's surface, which falling from their leaves keeps the ground below moist and cool; but they can, by means of their roots, pump it from a very considerable depth, and raising it into the atmosphere, diffuse it over the face of the country. Trees by the respiration from their leaves, surround themselves with air constantly cool and moist. They also shelter the soil from the direct action of the sun, and thus prevent the evaporation of water furnished by rains. In this way they contribute to the copiousness of streams."

The next essay of the series will treat of the electric agency of trees and plants.

For the New England Farmer.

THE HAIR SNAKE—BLACK SNAKE.

Mr. Editor:—I have been quite interested in one of the articles published in your January number, entitled "The Hair Snake;" the account of Mr. Gage exactly corroborates my previous observations, and the established opinions of various persons.

Some years since I saw a score or more of these tiny reptiles interlaced like network, and moving on the surface of a little patch of water; on expressing my astonishment at the number, and asking where they came from, I was informed that "people say that crickets produce them."

A few months since, I was engaged in the excavation of a well, and frequently found in the morning many crickets which had fallen into the excavation in the night. My attention was directed to a cricket which had been injured in some way, and a portion of its abdomen was torn away, showing a whitish thread-like substance, and remembering the remarks that crickets were the parents of the hair snake, I took a small stick and pulled out a bright, lively hair snake a little over a foot in length, and the cricket moved off seemingly none the worse for my operation. Whether this is a normal or abnormal change some other one must say; though it does not seem a greater change than that of a disgusting worm into a beautiful butterfly. Now will you let me know if you have ever heard of a black snake with a white ring about its neck, and said to be poisonous? I have always thought this said animal a myth, and of course poisonous if it should bite one, till last season I found a little black snake, about six inches long, and as large as a good sized knitting-nedle, having a distinctly marked white ring around its neck. It seemed extremely active, and resembled the black snake in every thing but the white ring and its small size. So hereafter I will not question the fact of their being such reptiles, and of course must believe in their venom.

O. S. S.

The Concord Grape.—I saw in the *Country Gentleman* a notice of the Concord and Isabella grapes, in regard to their time of ripening. As there appears to be so much difference in different localities, I thought I would give you the result of mine. I have endeavored to give them a fair trial. My Concord and Isabella are standing ten feet apart; they have the same cultivation and exposure. The Isabella is six years old and the Concord four. They both gave good crops the past season. The Concord gave fourteen pounds, and was ten days earlier than the Isabella. Some of the bunches were nearly equal to the outlines in the *Country Gentleman*. The Concord promises well, being perfectly hardy and a good bearer. It will, without doubt, be the grape to cultivate as far north as Oswego.—S. Worden, Minetto, Oswego Co.—*Country Gentleman.*

MR. HORSFALL'S SYSTEM OF DAIRY FEEDING.

The inquiries recently made in the *Farmer*, by Mr. BALDWIN, for further information in respect to the system of dairy feeding adopted by Mr. Horsfall, of whose report we gave a brief synopsis some time since, reminds us of a resolution then formed to revert again to this subject; as we felt at the time little satisfaction with the result of our attempt to give in a single column the main facts of a report or statement that would fill about a dozen of the long columns of our weekly sheet.

It was bean meal, and not "bran meal," that we spoke of as being given to the cows in proportion to their yield of milk. Our correspondent, also, uses the words, "best calculated to produce rich milk," instead of our expression, "necessary to his purposes"—an essential difference, when one of those purposes was carefully stated to be beef-making. But, in these fast times, we are all liable to habits of hasty reading.

By referring to our statement, Mr. Baldwin will see that the bran is mixed with the rape-cake, bean straw, &c., before the mass is steamed, and that the bean meal is added on its being fed out. To show Mr. Horsfall's estimation of the value of bran and of bean straw, we will copy his analysis of each, with some of his observations upon these articles.

BEAN STRAW.		BRAN.	
Moisture	14.47	Moisture	12.85
Albuminous matter	16.38	Oil	5.56
Oil or fatter matter	2 23	Albuminous matter	13.80
Woody fibre	25.84	Ash, (50 per cent. phosphoric acid)	6.11
Starch, gum, &c	31 63	Other constituents	61.68
Mineral matters	9.45		
Total	100.00	Total	100.00

"Bean straw," says Mr. H., "is dry and unpalatable when uncooked; by the process of steaming it becomes soft and pulpy, emits an agreeable odor, and imparts flavor and relish to the mess. In albuminous matter, which is especially valuable for milch cows, it has nearly double the proportion contained in meadow [field] hay. Bran also undergoes a great improvement in its flavor by steaming, and it is probably improved in its convertibility as food; it contains about 14 per cent. of albumen, and is peculiarly rich in phosphoric acid, nearly 3 per cent. of its whole substance being of this material. The properties of rape-cake are well known; the published analysis gives it a large proportion (nearly 30 per cent.) of albumen; it is rich in phosphates and also in oil."

In another connection, Mr. H. remarks: "I adduce these calculations in corroboration of my proposition that food rich in albumen has a more especial value for the production of milk than for fattening or beef-making." Again, he says: "I have already alluded to the efficiency of bean meal in increasing the quantity of butter. I learn also, from observant dairymen who milk their own cows, and carry their butter to market, that their baskets are never so well filled as when their cows feed on green clover, which, as dry material, is nearly as rich in albumen as beans. I am also told by those who have used green rape plant, that it produces milk rich in butter. From this we may infer that albuminous matter is the most essential element in the food of the milch cow, and that any deficiency in the supply of this will be attended with loss of condition, and a consequent diminution in the quality of her milk."

Rape-cake is made from the seed of an edible-rooted plant, called rape. The root is white and carrot-shaped, but does not grow as large as the carrot usually does. Rape-cake is the refuse remaining after the oil has been expressed, from the rape, or, as it is sometimes called, the *cole*-seed. It contains a large quantity of mucilage, some portion of albuminous matter, and a small proportion of oil. In Yorkshire and Lincolnshire, England, about sixteen bushels per acre is used, as a manure, and in wet seasons, brings heavy crops.

Albumen is the name given by chemists to the glossy liquid which forms the *white* of an egg, and is nearly identical with the gluten of vegetables, or that substance in flour of which paste is made.

Phosphorus is manufactured from bones; it is a solid substance, resembling fine wax, and of a pale yellow color; when exposed to the air it takes fire spontaneously, and burns with a pale, blue flame, scarcely visible except in the dark. When heated it takes fire and burns with a brilliant flame and intense light, and sends off dense white fumes—these fumes are phosphoric acid, and are produced by the union of the burning phosphorus with the oxygen of the atmosphere. If you burn a little phosphorus under a tumbler the white fumes will condense on the inside in the form of a white powder, which speedily absorbs moisture from the air, and runs to a liquid. That liquid is very sour and corrosive, and is *phosphoric acid*. This acid will combine with potash, lime, &c., and forms *phosphates*, and in these states of combination it exists in soils and manures, and enters into plants.

"Of the *Millet* there are three distinct genera. The Polish millet, cultivated in Poland, the common millet cultivated in Germany, and in England and United States, and the great or Indian millet, cultivated in India, Italy, and now in America." The Egyptian millet which you spoke of we think must be the great or Indian millet. We have it dried and hung up in our seed-room, as also the common millet. The latter is a frequent crop in this State. It is excellent both as a green fodder, or to be cured for hay.

It would afford us pleasure to reply to your questions more minutely, if our space would permit.

THE BRIGHTON PINE STRAWBERRY.

This is a new seedling, originated three or four years ago, by Mr. J. C. SCOTT, the originator of SCOTT'S SEEDLING. Our engraving was made from a drawing of a plant which was selected without any care, and had been carried in the hand a long distance. It is far from a fair representation of the fruit. We visited the grounds of Mr. SCOTT last season, and from the appearance of this strawberry, under his cultivation, we can recommend it as one of the best varieties, for size and bearing, and superior in flavor to most others. The fruit is large, frequently measuring an inch and a half in diameter, flattish conical, of a bright scarlet color, and the larger specimens are often marked with a deep suture, dividing them into two unequal parts. The flesh is very hard, and the berries bear transportation better than any other variety we have ever seen. The plants are remarkably strong, and bear their fruit at such a height from the ground that no mulching would be necessary to keep it from the dirt. The Brighton Pine is also very prolific, and in every respect deserves to take a high rank among the new varieties of this delicious fruit. As the season is near at hand for transplanting strawberries, those who are desirous to procure the best varieties will do well to examine the merits of the one so imperfectly represented by our engraving.

For the New England Farmer.

PORTABLE WINDMILLS.

MR. EDITOR:—Your Maine correspondent, "A. S.," inquires after "portable windmills." Mr. E. A. Howard, of this village, an ingenious mechanic, who has had much experience in mills propelled by wind, recently showed me a model of a portable mill, which my judgment tells me is of great promise. The simplicity of its construction is admirable—very compact—adapted either to the upright or circular saw, pumping, threshing, or any of the multitudinous uses to which the farmer and mechanic can profitably put such a machine. Its fans, when spread, extend sufficiently to give great power to the saw or thresher, yet are so constructed as to be unshipped and the machine housed in an inconsiderable space of time; and can be quite as easily rigged and put in motion. A man or boy of ordinary intelligence would be quite sufficient to conduct all its operations. It can be moved from place to place with the facility of a wheelbarrow. Mr. Howard is not a professional inventor, nor is he at all anxious to appear as one before the public, though to facilitate his business he has built and improved upon many machines used by mechanics. He employs in his work a steam engine of six horse power, and a windmill of his own construction, yet in point of economy, gives his preference decidedly to the latter; and from what I know of mechanics, think him right.

I believe that it would be for the interest of your correspondent, "A. S.," or any of your numerous readers who desire a windmill at once simple, portable and efficient, nor yet costing too much, to write Mr. H., or call on him personally. He is about securing his invention by "letters patent," and would build to order his machines—do it in the most reliable manner, for a moderate price, to operate in the most satisfactory manner.

T. N. JONES.

North Reading, Mass., Feb. 23, 1857.

REMARKS.—The above is an advertisment worth a moderately priced windmill to a man of business, and yet we give it a place here with cheerfulness, because we desire to see such a mill as Mr. Jones describes in common use on our farms. There ought to be a mill so constructed as to be attached to our barns, throwing their wings out from the top, and giving power to cut the hay, grind the corn, turn the grindstone and even to thresh if required.

MASSACHUSETTS BOARD OF AGRICULTURE.—A meeting of the Massachusetts State Board of Agriculture was held at the State House, on Wednesday (25th inst.) to consider the resolutions passed at a late meeting of citizens with reference to the establishment of a new State Agricultural Society. A full and free discussion took place, in the course of which Hon. R. C. Winthrop addressed the meeting in relation to the past history and the objects of the State Society, and generously pledged it for the sum of two thousand dollars in aid of an exhibition, should it be decided to hold one this year. The following motion was then adopted:

Voted, That in the opinion of this Board it is expedient to hold a State Cattle Show and Agricultural Fair sometime in the month of September or October, and that a Committee of Arrangements be now appointed, with authority to fix upon a time and place for holding the same, provided a sufficient guaranty fund is pledged to defray the expenses.

A Committee was accordingly appointed. It consists of Marshall P. Wilder, Samuel Chandler, John Brooks, Geo. Marston, Wm. G. Lewis, Moses Newell and Thomas J. Field.

LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE FARMER BY H. E. ROCKWELL.]

The *Eighth* of the series of meetings of the Legislative Agricultural Society was held Tuesday evening. Subject for discussion, "FARM IMPLEMENTS."

CHARLES L. FLINT, Esq., Secretary of the Massachusetts Board of Agriculture, was called on to preside. He called the attention of the meeting to some of the special topics which he thought would naturally come before them. There was scarcely anything, he said, in which so great advance had been made in practical agriculture as in what is called agricultural mechanics. There can be no question that great progress has been made over the ancients in bringing the inorganic forces of nature, the wind, water and steam, to bear, directly or indirectly, in agricultural mechanics. It was a hundred years after the time of Christ, before a simple water-wheel was invented. The wind-mill was not introduced into Europe till the eleventh century. But within the last forty or fifty years, the progress of agricultural mechanics has been exceedingly great; and much of this progress in this country has been brought about by the ingenuity, enterprise and constant energy of Massachusetts mechanics. Many of the improvements in the plow were doubtless suggested by the early experiments made in this State, although it is true that many improvements were also made, nearly simultaneously, by English mechanics. The substitution of iron for wooden plows is supposed to have been suggested at quite as early a day in this country as in England. But, within the last ten or fifteen years, the rapidity of the progress in improvement has been greater. Something of the rapidity with which the amount of manufactures for agricultural purposes has increased is shown by the "Statistics of Industry," for Massachusetts, where it will be seen that in 1845, the value of the shovels, spades, forks and hoes manufactured was $275,212; and in 1855 it was $894,515. The value of plows and other agricultural implements, aside from those enumerated, was, in 1845, $121,691; in 1855 it was $763,980. One of the noticeable features connected with the present state of the manufacture of agricultural implements, is the concentration of that manufacture in few hands. Whether that

change, and others that have been introduced, is an improvement, would be matters for the meeting to consider.

Mr. HOWARD, of the *Cultivator*, thought the improvements in agriculture, for the last half century, were, to a very great degree, owing to the advance in mechanical science generally, and its special application to agricultural implements. Jethro Wood, of N. Y., and Newbold, of N. J., took out patents for cast iron plows simultaneously. They were ridiculed by many farmers in this part of the country, who called them "pot-metal plows." Their plows were short, and were well calculated to break up the soil, but not fitted to bury the sod so that it would decompose. Mr. Howard thought more was due to the Massachusetts Society for the Promotion of Agriculture for the improvement in plows than to any other source. They instituted plowing matches, and offered premiums for excellence in plowing; and thus the attention of makers of plows was turned to their special adaption to particular purposes. It is as necessary to have different plows for different soils, or for different purposes, as to have a variety of tools for any other species of labor. The lighter class of agricultural implements which are made in New England, are superior to any made in any other part of the world. But we need a plow of a different pattern for hard land. Our mechanics should turn their attention to that want. The English and Scottish plows for clayey soil are superior to ours. As we have a better system of mechanical operations and labor generally than any other portion of our country, we ought to retain our present position as the manufacturers of agricultural implements for other parts of the world. The use of mowing and reaping machines will doubtless become very general where the land is adapted to them.

Hon. J. W. PROCTOR, of Danvers, spoke particularly of the Michigan plow, which turns a double furrow, being in his opinion superior to any he had used. It leaves the soil of turf land in a condition that it can be harrowed without disturbing the sod. On old land that has no turf to be turned under, a side-hill plow is found most popular among the farmers in Essex county. Considerable attention has been given to the mowing machine in that county. Repeated experiments have been made there to test the comparative excellence of different machines. Manny's machine has generally proved the best. One acre of grass has been cut by one pair of horses and one man in forty minutes, yielding two tons to the acre. It has been shown there satisfactorily, that, with one pair of horses, when they have been properly trained, ten acres of grass, producing two tons of hay to the acre, can be cut in a day. It has been demonstrated that grass can be cut for fifty cents an acre. There are some objections made to the Michigan plow—that it gets out of order, &c. But that is not the fault of the principle, but of the material of which the plow is made. Mr. Proctor wished to give his testimony especially in favor of these two implements —the Michigan plow and the mowing machine.

Hon. J. W BROOKS, of Princeton, doubted whether there had been as much improvement in plows, all things considered, as some are disposed to believe. He thought he used to know plows that would work as easily nearly fifty years ago, as those that are now made. The question is, whether the plow shall turn the furrow flat, or whether it shall pulverize the land. The latter kind of plow—the short, rather blunt plow—is the better, because, as it pulverizes the soil, it leaves the sod so that it will thoroughly decompose. When he plowed one portion of a field, turning the furrows flat, and another portion with a Michigan plow, he saw a great difference in favor of the latter, both in the crop, and in the thorough decomposition of the sods.

Mr. DYER, Secretary of the Connecticut Board of Agriculture, was called up by the chairman. He said he thought farmers, throughout the country, should be grateful to Massachusetts for what she has done in the improvement of agricultural implements. But there is room for still greater improvement. He doubted whether some implement would not be yet made for moving and pulverizing the soil, which will supersede the use of the plow. He inquired why it is that farmers are so slow to adopt many of the improvements that are made. Mechanics are quick to see, and ready to adopt anything that will facilitate their operations. Mowing machines have not been much introduced in Connecticut. The Michigan plow has been used some; but on the stony land of that State, it is found to break easily, and has not met with general approval. Mr. D. was then asked to explain the operation of the invention of Mr. Ayers, of Hartford, by which cattle, by their own weight, in stepping on a platform, draw water for themselves to drink. A few minutes were occupied in explaining the apparatus, and its utility seemed to be apparent, while its simplicity excited admiration. It was stated that the weight of a common sized cow was sufficient to draw water from a depth of thirty-six feet.

Mr. LEANDER WETHERELL spoke of some of the experiments made in England, in order to measure the force required to move plows in the soil. It is plain that a heavy plow requires more force than a light one. In some instances, it has been found that thirty per cent. of the force required in plowing is required to draw the plow on the sur face of the ground. It is therefore of importance to use a lighter plow. By experiments, it has been found that the resistance is not greater when the team moves quickly, than when it moves slowly; and this is an argument in favor of a quick team. He did not think that a large amount of muscle was

required for a strong team. He did not believe the plow would go out of use in his day, though it is barely possible. The *axe* was referred to as one of the most important of agricultural implements, and he claimed for Massachusetts the credit of making the best axes that are used in the country. *Carts* were next spoken of, and the question of the relative excellence of carts with narrow or wide wheels was considered. He thought the narrow wheeled carts better, because they were so much lighter. Clumsy, heavy implements of all kinds should give place to lighter ones where it is practicable. The Michigan plows had failed to meet with favor at the West.

Mr. WARD, of Orange, said the reason that the plows taken to the West failed, was because there is no grit in the soil to scour the plows and keep them bright. The steel plow, used there, keeps smooth more easily in that soil, and therefore they are the only plows used. The Michigan plow was then spoken of as being superior to any, for general use, in this State.

Mr. PARSONS, of Ludlow, said the farmers in his vicinity were satisfied that the old-fashioned Hartford plow was the best they had ever used. The plow should be adapted to the use to which it is to be applied; and as the soil in Ludlow and vicinity is hard, the short, Hartford plow is much preferred; and though the Michigan plow has been used there, it is not found well adapted to the soil. Mr. P. preferred a wide-wheeled cart, and he had used both kinds. He had never seen a mowing machine in his town; and the soil is so filled up with small flat stones, that he did not think they could be used profitably there. But where the surface is smooth, he had no doubt they would prove of great value. As to the hesitancy with which farmers accept new machines, he said it was to be accounted for in the fact that they are generally men who have no money to spend for mere experiments. He had no doubt that vast improvements had been made in agricultural implements; the hoe, for instance, has been vastly improved, and he hoped that the wealthy who have money to use in experiments, would continue to test machines, and then let the common farmers have the benefit of the results.

Mr. W. J. BUCKMINSTER, of the *Ploughman*, said that if he is a public benefactor who makes two blades of grass grow where one grew before, he is also one who enables us to accomplish as much in one hour as we did in two before. Several of the new kinds of machines now coming before the public were spoken of. The Corn Shelling machine was spoken of as good; but at the same time it does not follow that a machine will milk cows well. The corn planting machine had been used by a neighbor of his, who regretted that he did so, because the corn did not come up well and evenly.

Mr. PROCTOR wanted to hear something of the mowing machine which took the premium offered by the Massachusetts Board of Agriculture.

Mr. FLINT replied that the name of the person who entered the successful machine was Heath, of Ohio, and it was operated by a Mr. Henderson. The whole of the experiments in reference to mowing machines would appear in his report to the Legislature in a few days, and therefore he did not deem it necessary to speak of them now.

Mr. BLAKE, of Boston, questioned whether a proper test would show that the plows of fifty years ago were equal to those of the present day. The great reason why the comparison is thought to be so favorable for the old plow is, that less was required of plows then than now. He had tried the Michigan plow in all kinds of soils, and he believed it to be best adapted to the wants of the farmer, since with the same power you can go deeper, and the land is in as good tilth the first year as it is the second with any other plow. He thought it could be made to plow stony land by simply removing the small, forward plow, then they will be good plows to cover up stubble, corn stalks, or any thing else. He liked a side-hill plow also. One advantage is that so far as the plowing is begun it is completed, and the disadvantage of carting manure across any plowed land will be obviated.

Mr. HOWARD thought the opinions of the people with regard to the value of plows were based too much on the results in connection with the narrow locality where they had used them. There was no question that plows which would work well in some soils will not do any thing in others. As to the relative value of ancient or modern plows, he thought the fact that earth will adhere more to a wooden shovel than to an iron one would indicate to any person that a modern iron plow must work more easily than a wooden one.

Mr. BROOKS still contended that a wooden shovel would work easier than an iron or a steel one, in most circumstances, because there is less friction between the wood and soil than between iron or steel and the soil. Every body concedes that a wooden shod sled runs easier than an iron shod one, and a steel shod one easier than iron.

Mr. BUCKMINSTER inquired where the comparative friction of wood and iron, in sleds, had been tested.

Mr. BROOKS replied that nobody would dispute the fact that a wooden sled run easier on bare ground than an iron one. Without any very satisfactory conclusion of the question, the matter was dropped, and the subject for the next meeting was announced to be, "*Farming in New England and the West.*" Adjourned.

NEVER SAY DIE.—If you can't succeed at one business, try another. If you fail as a cobbler, enter yourself as a member of Congress. In short, do

anything but take to despair. When Monsieur Jollie presented his picture of "Moses crossing the Red Sea," the curate of the Louvre threatened to kick it out doors. Did that dishearten him? Not at all. He went home, added a little chrome yellow to it, gave it a new name, "Cæsar crossing the Rubicon," and sold it in less than a month to the same curate for ten thousand francs. Here we see the advantage of "never giving up." Had Monsieur Jollie been like most men, the insult he first met with on the first going round to "the National Gallery," would have resulted in a shilling's worth of prussic acid. But he wasn't like most men, and the consequence is he has become a lion of the first magnitude. When similarly situated, "go thou and do likewise."

For the New England Farmer.

WILL IT NOT PAY TO KEEP HENS WARM IN WINTER?

MR. EDITOR:—Since the hen fever has subsided, we hear much less from the poultry-yard. The experience of many during that time brought them to the conclusion that no profit was derived from keeping hens. My experience for a number of years proved to me the contrary. I do not think it is *absolutely* necessary to have fancy hen-houses, fancy nests, &c., or fancy breeds to occupy them. These are very gratifying to the eye, and if a person has plenty of time and money, are all very well; but I am not sure that "Miss Biddie" fully appreciates them, or that her egg-laying propensities are more profitably developed therein, than in more homely places, provided *always* that her comfort and convenience are as duly cared for. Hens cannot be expected to lay in winter very liberally, if at all, unless in warm quarters, and supplied with a variety of food. Neither do I find that profit increases with numbers. A flock of twelve pay me better than one of twice that number.

I keep nine in my barn cellar, where it is sufficiently light, and nothing freezes. They have a variety of food, but I cannot give an account of that, as I have never kept one; it is small, however, compared with their profit. The kind I have, is the Black Game, although not full blood; many of them have double, or five toes; their legs are black, the bottoms of the feet only being yellow. With your permission, I will give you a short statement of them. In the spring I dispose of all except a few hens for raising chickens. Last spring, I set a hen upon thirteen eggs; they were all hatched in May; eleven were pullets. In September some of these commenced laying. From this time to the last of December, I sold from these pullets and two old hens, (besides using what were needed in the family,) 46 dozens, for $11,61 cents, which gives the average price per dozen a fraction over 25 cents. During the month of January, 1857, one dozen was used, and I sold 18 dozens for $5,04 cents, being 28 cents per dozen. I think, Mr. Editor, these are good returns for five months, and I am sure my success resulted from keeping them in so warm a place, for I am certain no hen of mine would have ventured to lay an egg in January, if she had seen the thermometer, which hung on the other corner of my barn.

Now will it not pay to keep hens warm in winter, when eggs are scarce, and demand the highest prices?

EAST CHELMSFORD.

EXTRACTS AND REPLIES.

WHAT IS THE BEST CHURN?

I have the past season made fifty-eight hundred and fifty pounds of butter, and churned most of it myself, and all, in one of Crowell's thermometer churns. I have tried other kinds, and find this preferable to any thing else I have examined. But still, the labor is tedious.

I purpose to continue in the butter-making business, and to strive to get up an article to suit those of your city who prefer butter to "something that has a strong resemblance to it."

As you are a friend to improvement, especially agricultural, I thought when I told you my intent you would write and inform me of some churn so constructed, and the most convenient power to attach to the same, that would save that of my own right arm. If you will do so, when I have sufficiently tested the same, I will inform you of my experience of its utility.

One year ago, I sent to Nourse & Co. for No. 2 Improved English Seed Sower and Wheel Hoe, and found them both to work admirably. I wish also to obtain a large Michigan, or double swivel plow. Will you inform me of the price? also at what point and price a small number of full blood Cotswold sheep may be obtained.

Some time since an inquiry was made in the *Farmer* if a worn out-meadow could be made productive by pasturing it a few years with sheep. I have ninety or one hundred acres of pasture, and have, at different times, turned four and eight acres of old mowing into pasture, for six or seven years, and then back to mowing, together with old pasture that never had been mowed; and in each and every instance found the fleece like that of my Saxony sheep, all of which I have sold, too short to be remunerative.

Soil like mine, which is neither sandy or clayey, but that of common loom, must in either case be broken and re-seeded in order to answer any purpose for mowing.

S. P. I.

Waitsfield, Feb., 1857.

REMARKS.—We cannot inform you what churn is the best; we have often heard Fyler's spoken of in high terms. We have seen a little dog or sheep power, made of the best materials, which is said to answer for churning admirably. One of the Western New York dairymen once informed us that he had used it for many years, and used it by cosset power, and that nothing could be better adapted for the purpose.

A large double swivel plow will cost $19,00.

We cannot tell you where the Cotswold sheep are to be found.

—

GARGET.

MR. EDITOR:—While reading your paper, I have noticed several communications on the subject of garget in the udders of cows. Perhaps my mite may be worthy at least, of perusal.—Through the first of my farming operations, I was very much troubled with that disease about my cows, and treated it as a disease that must be helped or cured, but not prevented. Now I endeavor to prevent. For a number of years I have practiced giving my cows meal composed of beans one-

part, and oats two parts, the quantity about one quart daily, given in the winter, and while the cows are dry, as much as possible. I think this treatment operates as a preventive, for my cows have had only slight attacks, if any, while treated in this way, for three or four weeks yearly. Let others try it and give the result; it is simple, and the trial will cost but little. A. D.

Stow, Vt., Feb., 1857.

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BONE MANURE.

I wish to inquire of you the best thing I can do with thirty or forty bushels of bones. I am a cultivator of the soil and wish to convert the bones into the best fertilizer. Be pleased to answer the inquiry through the weekly *Farmer* and oblige,

G. R. SPAULDING.

REMARKS.—Take a half hogshead tub and set it in some convenient place, and pile horse manure about it nearly to the top; break the bones a little if convenient, or if not, put them in whole, then add at the rate of four pounds of water to one pound of sulphuric acid, and turn upon the bones and stir them well. If you find the liquid is not strong enough, add more acid and stir again. In this way you will be able to dissolve any quantity of bones you may have, and they will be among your best fertilizers. The acid comes in carboys of a 100 to 150 pounds, and by that quantity will cost 3 or 4 cents a pound. The acid is not lost, for it is highly valuable in itself. The manure about the tub will catch and save what may leak or be spilt out.

—

HEN-HOUSE FURNITURE.

FRIEND BROWN:—I propose to build a hen-house the coming summer, of the following dimensions, viz., 27 feet long, 9 or 10 feet wide, and 10 feet high on the north side, and slanting to the south, the roof to be mostly covered with my hot-bed glass when not in use.

The three main objects in view are, first, to have a place to shut them up at any time I wish; second, to have a warm place in winter; third, to save all the manure. What is the best plan for roosts and nests? Will you or some of your correspondents answer. B. F. CUTTER.

Pelham, N. H., Feb. 23, 1857.

REMARKS.—What man or woman wise in hen houses, will reply.

—

DRAIN TILE.

I want you should tell me and my neighbors how water gets into drain tile, so as to run off? I have maintained that it must soak through the tile; others say it cannot, for if it did they would soon crumble to pieces. Do you know where drain tile can be purchased nearest to Maine?

Mercer, Me., 1857. HANNIBAL INGALLS.

REMARKS.—In using tile for draining, the water finds its way into the joints where the tile come together; they are usually covered with a strap of tin or flat stone, but the water finds its way freely. It also passes through the pores of the tile, but that does not cause them to fall to pieces unless frost finds them. Tile are manufactured by Mr. JAMES M. CRAFTS, of Whately, Mass., near Greenfield, and of the best quality.

—

THE TRUNK APPLE—POTATOES ON SWAMP.

I see that some of your correspondents wish to know my P. O. address it is *Portland Me.:* my residence is two miles out. I am the correspondent who wrote in regard to the "Trunk Apple," in Dec., at Harrisburg.

I have a piece of muck ground which was spaded twelve inches, and drained thoroughly last fall. My purpose is to raise a crop of potatoes next year from it. I have made arrangements to hill it, and put a shovel full of manure in the hill, cover it with muck, drop potatoes, cover, then put a handful of lime upon the hill for the purpose of removing the sourness, as it has been recently reclaimed. Is there any better crop to put on, or any better mode of treating the land than above mentioned?

S. D. THOMPSON.

REMARKS.—Some of the finest potato crops, of late years, in this region, have grown on bog meadows. If the season is favorable you will probably succeed well.

—

SUGAR CANE—COLD WEATHER—ILLINOIS.

I see there is quite an excitement in regard to the Chinese sugar cane. I would propose that you recommend extracting the juice from our common sweet corn stalks. I think they contain quite a large amount of saccharine matter of a very fine quality.

We have had a very severe winter out here. The thermometer, two weeks ago yesterday, was down to 32° below zero, and in Galena, the same day, 40° below zero; but most of the time it has been from 8 to twenty below. Have not had but two or three days that it thawed any since the middle of December. First-rate sleighing all the time.

This is a splendid farming country, and Illinois is destined to be a number one State as to wealth and population. G. ANDERSON.

Rockford, Ill., Feb. 2, 1857.

—

A FINE OX.

Allow me to give you the weight of an ox I have raised and fattened, and sold to Messrs. Root & Nash, and Jones & Warner, butchers, of Greenfield. He was slaughtered in this place last Wednesday, and weighed this P. M.

Weight of tallow	258 lbs.
Weight of hide	153 "
One side weighed	1032 "
" "	1019½ "
Whole weight	1462½ "

SAMUEL STEBBINS.

Deerfield, Mass., Feb. 21, 1857.

—

MIXING OF CORN.

We are cautioned against attempting to cultivate the sugar cane in close proximity to "*Dorough corn, Chocolate corn or Broom corn.*" Will some one who knows, state whether the sugar cane readily mixes with the common varieties of our northern Indian corn? W.

E. Calais, Vt., Feb. 23, 1857.

DO YOUR BEST.

The times are hard, an' fortune shy,
Has lang been ilka grummler's story,
But work aye on, an' aim aye high,
The harder work—the greater glory.
The honest mind, the sterling man,
The chains o' poortith canna fetter;
So strive, an' do the best you can,
An' take my word, ye'll sune be better.

Although ye toil for little gear—
Tho' wiles your labor may be slichted,
The darkest sky is sure to clear,
An' virtue's wrangs wi' aye be richted.
Ne'er deem yoursel' an ill-used man,
Nor ca' the world a heartless debtor;
But strive, and do the best ye can,
An' take my word, ye'll sune be better.

O, sweet is freedom's caller air,
An' sweet is bread o' ane's ain winning!
To work and win be aye your care,
Great things hae aft a sma' beginning.
Let nought e'er ding ye frae your plan;
Stick to your creed in ilka letter;
But strive to do the best ye can,
An' take my word, ye'll sune be better.

—*Poems of James Ballantyne.*

For the New England Farmer.

CLEAR UP! CLEAR UP!

To how many farmers will the departure of the snow reveal an unsightly array of refuse wood, broken carts and wagons, that are thought to be "too good to cut up," and yet are too poor to be of any further service. There are, also, old stumps, that evidently were disturbed long before Mr. Willis's machine was invented; and logs, that when drawn there were designed for wood, when that convenient time, "when there is nothing else to do," should arrive, that they might be reduced to proper dimensions for that purpose. But alas! such ugly proportions have effectually warded off the attack, and consequently, they are suffered to lie against the wall, until decay has accomplished its work.

The farmer thinks little, and perhaps nothing, about it, as he is accustomed to see them from year to year, and is not aware how much such rubbish detracts from the beauty of his premises. His family are not sensible of the enjoyment or luxury of a clean door-yard and surroundings, for they have never tasted it.

The farm-buildings, yards, &c., are like the index to a book, and the stranger, as he passes, discovers the character of the farmer by what he thus beholds, as readily as he learns the contents of a book by glancing at the index. Who shall say that the judgment thus based is not correct? If we find the gate blown down, and suffered to lie month after month, or rendered useless because it hangs by one hinge, may we not expect to find the wall down in his fields, or rods of fence propped up temporarily, and only waiting the first touch of the cattle to afford access to the field of grain? If he allow his door-yard to be thus encumbered, shall we not find clumps of bushes growing around stone heaps in his mowing fields, the walls hedged with noxious brambles?

If the two shade trees that stand before his house have not clean trunks and well spread branches, shall we not find his apple trees surrounded by an army of pirate sprouts, that rob the tree of the nourishment the roots afford, and thus cause the top to decay? On the contrary, how different is the effect of a neat, white cottage, with its plain but substantial fence, also painted or whitewashed, enclosing a clean plat of ground for a front yard, covered with a rich carpet of green, or ornamented with shrubs and flowers, as the taste of the family may dictate.

How spontaneous the remark as we pass such a situation, "Here is a farmer of thrift, and a family of taste;" and we are half inclined to tarry a moment to participate in their enjoyment, and thank them for their worthy example. We rarely ride many miles into the country without seeing these extremes; and if the eye of one of the former class should meet these lines, we hope he will resolve to *clear up*. V. C. G.

Nashua, February, 1857.

REMARKS.—Carry out these ideas, and what a change would come over the rural homesteads of New England. But improvement is going on; there is less rotten wood and fewer broken vehicles in the door-yards, and not so many cast-off pantaloons and old hats in the windows, as there were ten years ago,—while there are a good many more books in the house, and more money in the drawer!

GET IN ROOT CROPS.

We write under the settled conviction, that the profits of the general farmer may be more rapidly increased under a judicious cultivation of the various roots, than in any other way, that more than double the value, per acre, may be obtained from them than from hay crops, and more, even, than from the small grains, or Indian corn.

The cultivators of England have long understood this secret, and have become prosperous under its teachings. No man, probably, from this country ever gave the subject so much attention as did Mr. WEBSTER, during his mission in England. And few men, in our judgment, have done their country so signal a service as he did by his investigations of this subject, and by a promulgation of the facts which he learned. They awakened attention, and the fruits of his suggestions are now manifest all through New England, at least.

Of the turnip, there is a great variety, and their cultivation is too well understood to need any explanation of ours. For winter and spring use, many persons prefer not to put in their root crops until the third week in June. We prefer a little earlier date.

We are gratified to notice that the cultivation of the sugar beet is beginning to enlist the attention of farmers. Those who have made trial of it, speak of it in terms of approbation. It is not only very productive, but one of the best roots that can be fed to milch cows and young cattle—causing a rich flow of milk in the former, and great vigor, sprightliness and hardihood in the latter. There is proba-

bly no climate in the world more admirably adapted to the cultivation of the sugar beet than that of New England. In no case which has fallen under our observation, have those who have planted it failed of securing a paying crop, while in most cases it has yielded a greater actual profit than any other product of the farm.

It should be planted in drills, on good, deep, and rather warm soil, well stimulated with rich and invigorating manure, and should be carefully hoed and kept clear of weeds. The soil between the rows, and between the roots in the rows, should be kept light, in order to facilitate the absorption of those fertilizing agents from the atmosphere upon which, in a very great measure, the perfect development and maturity of the system are found to depend.

A mechanic having a cow, and but a small piece of ground from which to derive the means of sustaining her, cannot do much better than to plant a portion or the whole of it to sugar beets. He will in this way secure more salutary aliment for his animal than in any other way, and at less expense. From eight to thirteen hundred bushels have been taken from an acre, and in several cases, the crop has amounted to fifteen hundred. The roots attain a large size, and are very nutritious and wholesome. Swine fatten rapidly on boiled sugar beets, and the pork made on this food is said to be more solid than that made on potatoes or any other root. We advise every one this season, to put in a small plot of this vegetable, and give it a trial.

For the New England Farmer.

SEEDS FOR KANSAS.

DEAR SIR:—Permit me to call the attention of the Massachusetts State Kansas Committee to the importance of taking some immediate steps to furnish to the settlers in Kansas, a supply of seeds for the spring planting, especially *potatoes*. Last spring they were so scarce as to command, in some cases, from six to eight dollars per bushel.

The soil of Kansas is well adapted to the potato, but to insure a successful crop, the early varieties must be relied upon. No portion of the country, is so famed for the varieties of early potatoes as the vicinity of Boston. Cannot the interest and sympathy of the amateur farmers, gardeners, market-men, and others, be enlisted to furnish to your committee a gratuitous supply of all the most esteemed varieties, to be forwarded at once to the Territory? I will pledge myself to see them distributed through the different sections of the Territory, so as to give them a general introduction. A stock of the different varieties of beans, both garden and field, and also of peas, would be most acceptable. Yours truly, E. B. WHITMAN,

Gen. Agt. National Kansas Committee.

REMARKS.—We will take charge of such seeds as our friends may leave at this office, for the purpose above indicated, and see that they go into proper hands.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

FRENCH POT AU FEU.—I cannot expect, says Soyer, in his "Shilling Cookery," that this truly national soup of France can be made to perfection, or done with so much care as in that country, therefore I have simplified it, and shall call it the French Cottage Pot au Feu, or French Soup.

Put a gallon of water in the pot, put four pounds of the buttock of beef, or shin, or five pounds of the thick part of the leg, three tea-spoonfuls of salt, one of pepper, four onions, four leeks cut in pieces, two carrots, and two good-sized turnips, three cloves, one burnt onion, or three spoonfuls of coloring; set it on the fire; when beginning to scum, skim it, and set the pot on one side of the fire. Add now and then a drop of cold water; it will make it clear. Boil four hours. Bread sliced, put into the tureen, and pour the broth with some of the vegetables over; serve the meat separate, and the remaining vegetables round.

If this simple receipt is well attended to, you will find it a very good soup and bouilli. If you run short of any of the vegetables, make it good with others. If no burnt onions or coloring, the soup will be white instead of a sherry color; but still it will be good. In France they always put in half a pound of ox liver to every four pounds of meat. I am sure they are too good judges over water to spoil their soup; in fact, there the ox liver costs as much as the meat—sixpence per pound—therefore it is not with a view of saving, but to make it better.

PUMPKIN PIES WITHOUT EGGS.—As I have never seen the following receipt in print, says a correspondent of the *Prairie Farmer*, and thinking it may be of interest to some of your lady readers, I send it to you, and you may do as you see fit about publishing it:

Prepare the pumpkin in the same manner as when you used eggs; take a tablespoonful of flour to a pie—mix it with some milk—stir it in the prepared pumpkin, and when baked you will not be able to tell any difference in the pies made with eggs and those made with flour.

TEA CAKE.—Three cups of sugar, three eggs, one cup of butter, one cup of milk, a small lump of pearlash, and make it not quite as stiff as pound cake.

PINT CAKE.—One pint of dough, one tea-cup of sugar, one of butter, three eggs, one tea-spoonful of pearlash, with raisins and spices.

SOFT GINGERBREAD.—Six tea-cups of flour, three of molasses, one of cream, one of butter, one table-spoonful of ginger, and one of pearlash.

JUMBLES.—Three pounds of flour, two of sugar, one of butter, eight eggs, with a little carraway seed; add a little milk, if the eggs are not sufficient.

RAISED WAFFLES.—Make a thick batter of milk and wheat flour, add four eggs, beat light a gill of yeast, a spoonful of butter; let it rise some hours.

SWEET POTATO WAFFLES.—Two table-spoonfuls of mashed potato, one of butter, one of sugar, one pint of milk, four table-spoonfuls of wheat flour. Mix well together, and bake in a waffle iron.